Town of Arlington, MA
Redevelopment Board

Agenda & Meeting Notice
May 18, 2020

This meeting is being held remotely in accordance with the Governor's March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law G.L. c. 30A, Section 20. Public comments will be accepted during the public comment periods designated in the agenda. The public may email or provide any written comments to jraitt@town.arlington.ma.us by May 18, 2020 at 12:00 p.m. If you are providing visual information as part of your correspondence, the Board requests that it is received by May 15, 2020 at 12:00 p.m.

The Arlington Redevelopment Board will meet Monday, May 18, 2020 at 7:00 PM in the
Join Zoom Meeting with audio and video by connecting using this link and Meeting ID: https://zoom.us/j/92252518239 | Enter Meeting ID: 922 5251 8239 or join by phone by calling: 1-646-876-9923, enter the Meeting ID 922 5251 8239 followed by "#"

1. Public Hearings

7:00 p.m.

Docket #2818, 880 Massachusetts Avenue
Continued Public Hearing
Board will continue hearing for Special Permit Docket #2818 to review application by Back Bay Signs, for TD Bank, at 880 Massachusetts Avenue. The applicant proposes to install new signage in a B4 Vehicular Oriented Business District. The opening of the Special Permit is to allow the Board to review and approve the application in accordance with the provisions of MGL Chapter 40A and the Town of Arlington Zoning Bylaw Section 3.4, Environmental Design Review.

1207-1211 Mass Ave
Continued Public Hearing
Board will continue hearing for Special Permit Docket #3602 to review application by James F. Doherty for 1211 Mass Ave Realty Trust, at 1207-1211 Massachusetts Avenue, Arlington, MA, 02476, to construct a 50-room hotel and restaurant at 1207-1211 Massachusetts Avenue in the B2 Neighborhood Business District and B4 Vehicular Oriented Business District. The continuation of the hearing is to allow the Board to review and approve the application in accordance with the provisions of MGL Chapter 40A and the Town of Arlington Zoning Bylaw Section 3.4, Environmental Design Review.

882-892 Mass Ave
Public Hearing
Board will open public hearing for Special Permit Docket #3625 to review application by 882-892 Massachusetts Ave., LLC, for 882-892 Massachusetts Avenue, to develop a new mixed-use building with twenty-

two (22) one-bedroom residential units and one (1) commercial space in a B2 Business District. The opening of the Special Permit is to allow the Board to review and approve the application in accordance with the provisions of MGL Chapter 40A and the Town of Arlington Zoning Bylaw Section 3.4, Environmental Design Review.

• For each public hearing, applicants will be provided 5 minutes for a presentation.
• DPCD staff will be provided 3 minutes to discuss public hearing memo.
• Members of the public will be provided time to comment.
• Board members will discuss each docket and may vote.

2. DISCUSSION & VOTE

8:30 p.m. Meeting schedule for June, July, August

• Board members will discuss and vote.

3. Director's Updates

8:35 p.m. Director will provide updates

4. Open Forum

8:45 p.m. Except in unusual circumstances, any matter presented for consideration of the Board shall neither be acted upon, nor a decision made the night of the presentation. There is a three minute time limit to present a concern or request. Meeting participants will not have access to video.

5. Adjourn

Estimated 9:05 p.m. – Adjourn

6. Correspondence Received

Correspondence received from:
D. Seltzer 051120
D. Seltzer 051420 with attachments
C. Klein 051620 with attachment
M. Varoglu 051720
A. Bagnall 051820
B. Elliott 051820
D. Seltzer 051820
E. Pyle 051820
H. Helson 051820
P. Worden 051820 with attachment
Z. Brown 051820
B. Thornton 051820
B. Rubin 051820

Town of Arlington, Massachusetts

Public Hearings

Summary:

7:00 p.m.

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ATTACHMENTS:

	Type	File Name	Description
🗋	Reference Material	Application_Forms_and_Narrative.pdf	Docket #2818 880 Mass Ave. (reopen) Application Forms and Narrative
🗋	Reference Material	TD_Arlington_Sign_Package.pdf	Docket #2818 880 Mass Ave. TD Arlington Sign Package
	Reference		880 Mass Ave updated E05

Material	Agenda_Item_1_-_880_Mass_Ave_updated_E05_sign.pdf	sign	
Reference Material	Agenda_Item_1_for_1207-1211_Mass_Ave_-_Corresp_to_Jennifer_Raitt_from_MWO_5-11-20_(3).pdf	1207-1211 Mass Ave. - Correspondence to Jennifer Raittt from MWO 5-11-20	
Reference Material	Agenda_Item_1_-_Memo_to_ARB_re_Docket_#3602_05-14-20.pdf	Memo to ARB re Docket #3602 05-14-20	
Reference Material	Memo_from_Counsel_to_ARB_re_Docket_No._3602.pdf	Memo from Counsel to ARB re Docket #3602	
Reference Material	Zoning_Recodification_Vote_and_Excerpts_form_Guide.pdf	Zoning Recodification Vote and Excerpts from Guide	
Reference Material	Certified_Vote_on_2016_ATM_Art_6.pdf	Certified Vote on 2016 ATM Art 6	
Reference Material	Agenda_Item_1A_-_Memo_to_ARB_re_Review_of_New_Material_Submissions_01-21-20.pdf	Docket #3602 1207-1211 Mass Ave. Memo to ARB re Review of New Material Submissions 01-21-20	
Reference Material	Agenda_Item_1B_-_EDR_Public_Hearing_Memo_Docket_#3602_1207-1211_Mass_Ave_Final.pdf	EDR Public Hearing Memo Docket #3602 1207-1211 Mass Ave. Final	
Reference Material	Agenda_Item_1F_-_Application_Materials_Submitted_06-21-19.pdf	Application Materials Submitted 06-21-19	
Reference Material	Agenda_Item_1G_-_Application_Materials_Submitted_01-21-20_-.pdf	Application Materials Submitted 01-21-20	
Reference Material	Agenda_Item_1_-_EDR_Public_Hearing_Memo_882-892_Massachusetts_Avenue_051420.pdf	EDR Public Hearing Memo 882-892 Mass. Ave. 051420	
Reference Material	Combined_Application_Materials_-_updated_5-7-20.pdf	Docket #3625 882-892 Mass. Ave. Combined Application Materials 5-7-20 update	
Reference Material	Letter_from_B._Annese_re_filing_-_received_4-21-20.pdf	Docket #3625 882-892 Mass. Ave. Letter from B. Annese re filing 4-21-20	
Reference Material	Phase_III.pdf	Phase III	

PLANNING & COMMUNITY DEVELOPMENT

2020 MAR -3 P 1:07

TOWN OF ARLINGTON
REDEVELOPMENT BOARD
Application for Special Permit In Accordance with Environmental Design Review Procedures (Section 3.4 of the Zoning Bylaw)

Docket No. _____

1. Property Address 880 Massachusetts Avenue
 Name of Record Owner(s) TD Banknorth NA Phone 856-470-3983
 Address of Owner 17000 Horizon Way Mount Laurel, NJ 08053
 Street City, State, Zip

2. Name of Applicant(s) (if different than above) Back Bay Sign for Coast Sign Inc.
 Address 65 I Industrial Way Wilmington, MA 01887 Phone 617-230-4434
 Status Relative to Property (occupant, purchaser, etc.) Sign Contractor

3. Location of Property 880 (874) Mass Ave 126.0 0002 0002.C
 Assessor's Block Plan, Block, Lot No.

4. Deed recorded in the Registry of deeds, Book 1281, Page 136;
 -or- registered in Land Registration Office, Cert. No. _____, in Book _____, Page _____

5. Present Use of Property (include # of dwelling units, if any) BV

6. Proposed Use of Property (include # of dwelling units, if any) _____

7. Permit applied for in accordance with the following Zoning Bylaw section(s)

section(s)	title(s)
3.4	Environmental Sign Review
6.2	Signs

8. Please attach a statement that describes your project and provide any additional information that may aid the ARB in understanding the permits you request. Include any reasons that you feel you should be granted the requested permission.

To allow TD Bank to replace one double sided directional sign with new non-illuminated directional sign 1'-8½" high x 20" wide and 4'-6" overall height.

(In the statement below, strike out the words that do not apply)

The applicant states that TD Banknorth, NA is the owner -or- occupant -or- purchaser under agreement of the property in Arlington located at 880 Mass Ave which is the subject of this application; and that unfavorable action -or- no unfavorable action has been taken by the Zoning Board of Appeals on a similar application regarding this property within the last two years. The applicant expressly agrees to comply with any and all conditions and qualifications imposed upon this permission, either by the Zoning Bylaw or by the Redevelopment Board, should the permit be granted.

Signature of Applicant(s)

65 I Industrial Way Wilmington MA 01887 — 617-230-4434

Address — Phone

Town of Arlington Redevelopment Board
Application for Special Permit in accordance with Environmental Design Review (Section 3.4)

Required Submittals Checklist

Two full sets of materials and one electronic copy are required. A model may be requested. Review the ARB's Rules and Regulations, which can be found at arlingtonma.gov/arb, for the full list of required submittals.

___ Dimensional and Parking Information Form (see attached)

X Site plan of proposal

___ Model, if required

X Drawing of existing conditions

X Drawing of proposed structure

___ Proposed landscaping. May be incorporated into site plan

X Photographs

X Impact statement

X Application and plans for sign permits

___ Stormwater management plan (for stormwater management during construction for projects with new construction

FOR OFFICE USE ONLY

_____ Special Permit Granted Date: _____

_____ Received evidence of filing with Registry of Deeds Date: _____

_____ Notified Building Inspector of Special Permit filing Date: _____

TOWN OF ARLINGTON
Dimensional and Parking Information
for Application to
The Arlington Redevelopment Board

Docket No. _____

Property Location 880 (874) Mass Ave

Zoning District B4

Owner: TD Banknorth NA

Address: 17000 Horizon Way Mount Laurel NJ 08053

Present Use/Occupancy: No. of Dwelling Units:

Uses and their gross square feet:

Proposed Use/Occupancy: No. of Dwelling Units:

Uses and their gross square feet:

	Present Conditions	Proposed Conditions	Min. or Max. Required by Zoning for Proposed Use
Lot Size	4,439 sf.		min.
Frontage			min.
Floor Area Ratio			max.
Lot Coverage (%), where applicable			max.
Lot Area per Dwelling Unit (square feet)			min.
Front Yard Depth (feet)			min.
Side Yard Width (feet) right side			min.
left side			min.
Rear Yard Depth (feet)			min.
Height			min.
Stories			stories
Feet			feet
Open Space (% of G.F.A.)			min.
Landscaped (square feet)			(s.f.)
Usable (square feet)			(s.f.)
Parking Spaces (No.)			min.
Parking Area Setbacks (feet), where applicable			min.
Loading Spaces (No.)			min.
Type of Construction			
Distance to Nearest Building			min.

Town of Arlington
Redevelopment Board

Description of Proposal:

The purpose of this proposal is to allow TD Bank to replace the existing illuminated directional sign located at the Lockeland Avenue entrance to the bank parking lot. The existing sign is 3'-6" wide by 2'-1" high and has an overall height of 4'-0". The proposed non-illuminated sign is 2'-0" wide by 1'-8 1/2" high and has an overall height of 4'-6". The location of the sign is setback 12'-8" from the road and 4'-8" from the driveway.

Special Permit Citeria:

1. The Bylaw allows the Redevelopment Board to permit signs that are greater size, quantity or location.

2. This sign will be a service to the public good by providing direction to the by the bank's drive through and atm.

3. The sign proposed will assist vehicular traffic approaching the bank from both Mass Ave and Lockeland Ave.

4. N/A

5. N/A

6. The proposed sign replacement will be in keeping with the existing sign and will no longer be internally illuminated and thus decrease the light pollution in the immediate area.

7. There will be nothing detrimental to the character of the neighborhood caused by this sign.

TD Bank
America's Most Convenient Bank®

TD Bank, N.A.
17000 Horizon Way
Mail Stop: NJ5-005-105
Mount Laurel, NJ 08054
T: (856) 470-3983
Vicki.Sylvester@td.com

AUTHORIZATION LETTER

February 27, 2019

To Whom It May Concern:

Please allow this letter to serve as authorization for employees of Image Resource Group to act on behalf of TD Bank N.A n the filing of any applications for required permits and/or approvals for the Signage Renovation Work of the TD Bank N.A owned facility. This would include, but is not limited to, signing any owner signature application, appearing before any governmental agency at general meetings or public hearings addressing the signage at the facilities and, if necessary, recording any such decisions.

Should you have any questions, please do not hesitate to contact me directly at (856) 470-3983.

Sincerely,

Vicki Sylvester

Vicki Sylvester
TD Bank N.A. - Officer

cc: File
Steven Prouse – Image Resource Group

Verna M. Cornish

Verna M. Cornish
Notary Public, State of New Jersey
Commission No. 2181623
Commission Expires October 30, 2020



EXISTING SITE PHOTOGRAPH

Site Recommendation Book

Arlington ID #: 1021
880 Massachusetts Avenue
Arlington, MA

Preliminary Recommendations
July 22, 2019

Revisions
November 13, 2019
November 20, 2019
December 17, 2019

IMAGE RESOURCE GROUP BRINGING DESIGN TO REALITY
130 Pinnacle Point Ct., Columbia, SC 29223, P: 803-790-2121 F: 803-790-2125 Company Website: www.imageresourcegroup.com Project Management Website: www.irgpm.com

Project Policies and Procedures

You are a valued asset to this project's success - please take a moment to review the guidelines listed, below because your safety and reputation matter.

Standard Onsite Code of Conduct Expectations

- IRG Project Manager must be aware of your presence while on site. Crew Lead must present letter of authorization to the store management prior to the start of work.
- Vehicles and equipment are to be staged as far from customer entrances & parking as possible.
- Crew members' attire should clearly identify the company with which they are working. Please do not interact with customers unless life safety concerns apply.
- Standard Protocol for working overhead is to properly block the walk space beneath the work area with cones when working on sign faces and to have a full flag crew when cabinets and heavy items are being lifted. Be mindful of potential debris dropping onto pedestrians & customers walking below, especially when removing old sign faces that may break during removal.
- No Project related trash (bulbs, faces, signs, screws, crating, etc.) shall be left on site in any trash bin or containers NOT owned by the respective vendor. All waste to be recycled/disposed offsite.
- All signs installed must be level and in pristine condition upon completion. Touch up paint will be provided to address scratched cabinets.
- Photographs: All signs installations and punch-related revisit work must be photographed to include exterior, and interior to confirm that signs light properly prior to leaving the site. Please note that by photographing the interior and exterior of the sign, you will capture the installation, and relieve yourself of potential liability for damages that may occur after leaving a site.

Sign Type- Specific Instructions

- Refacing Monuments & Pylons: If new damage is discovered on site, immediately notify IRG to include landscaping issues found or created by sign removal/installation. Ensure sign is properly lighting.
- Refacing Channel Letters: Confirm lettersets lights properly. Wipe down all letter cabinets and "BANK" letter faces.
- Replacing Wall Signs: All holes from previous sign should be sealed and water tight, without excess of sealants left behind. Every attempt to cover as many existing holes with the new sign as possible should be made, especially where new signs are smaller. The IRG Project Manager must be notified of any holes, ghosting, or damage still visible following the installation of a new sign.
- Directional Signs: All directional signs are to coordinate with any marking on the pavement, If new directional signage counteracts the current flow of traffic, remain on site until you have reviewed next steps with your IRG Project Manager. Any existing electrical must be powered down and made safe, then hidden below ground level consistent with regulations. Immediately notify IRG of damaged landscaping found or created by sign removal/installation
- Acrylic/Plate Lettersets: Retained letters are to be wiped down, and completion photos should include the entire letterset.
- Awnings: Completion photos are to include all recovered awnings, applied graphics, and enough surrounding area to confirm the location of each.
- Restoration & Painting: Completion photos are to include close up photos and enough surrounding area to confirm the location of the impacted area.



Site Plan



ORIGINAL PHOTOGRAPH


COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E01

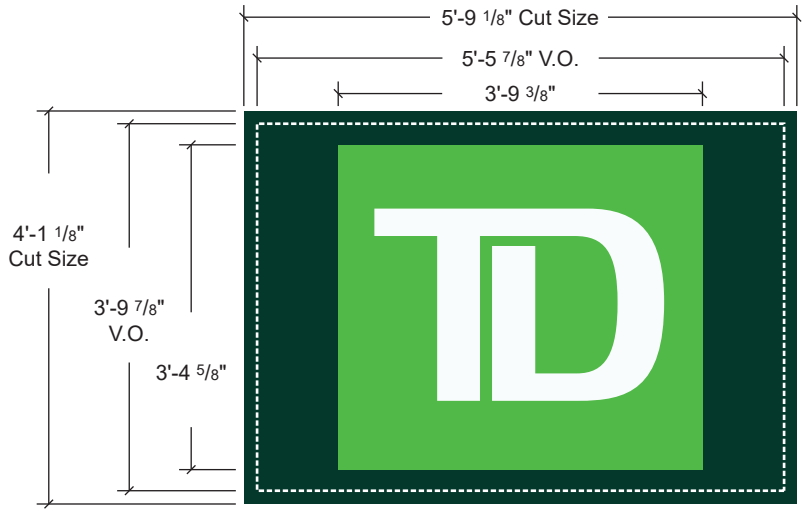
Existing Signage:
D/F Non-Illuminated Pylon
Overall: 4'-2" tall 5'-10" wide 1'-2" deep
Square Footage: 24 sq.ft.

SPECIAL CONDITIONS

Power to be run to sign.
Retrofit installation of LED sticks required. (Qty - 12) Sloan Bracket 402297-10 Required to complete retrofit

Lighting

Lamp Size: 48"
Lamp Qty: 6
Power Supply Qty: 2



FRONT VIEW
Scale- 1/2"=1'-0"

TDB-RP-FS.0002 **Qty 2** 24.05 sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Background to be 3M 3630-6513 Translucent Dark Green Vinyl applied to first surface. Logo to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.


MFG NOTE
Any seams in vinyl to be located at bottom of T Crossbar



ORIGINAL PHOTOGRAPH



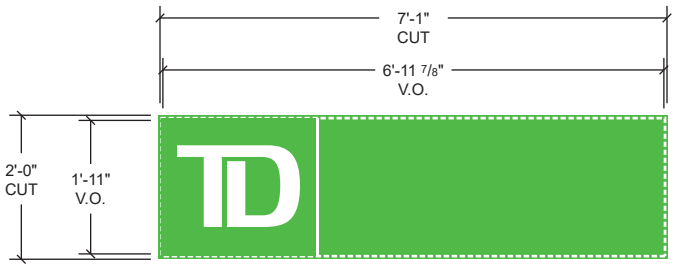
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E02

Existing Signage:
Illuminated Wall Sign
Overall: 2’-1/2” tall 7’-1” wide 8” deep
Square Footage: 14.5 sq.ft.

SPECIAL CONDITIONS

No special conditions.



FRONT VIEW Scale- 3/8”=1’-0”

Lighting

Lamp Size: 84”
Lamp Qty: 2
Power Supply Qty: 1

TDB-CRP-24X85 14.17 sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Vinyl to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



ORIGINAL PHOTOGRAPH



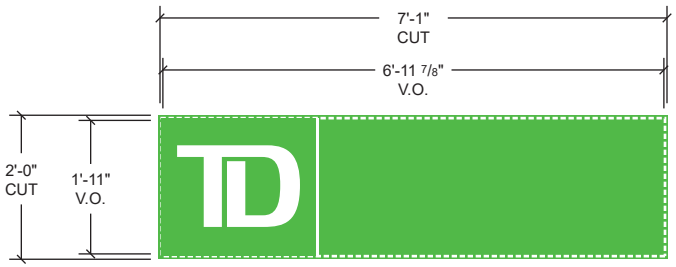
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E03

Existing Signage:
Illuminated Wall Sign
Overall: 2'-1/2" tall 7'-1" wide 8" deep
Square Footage: 14.5 sq.ft.

SPECIAL CONDITIONS

No special conditions.



FRONT VIEW Scale- 3/8"=1'-0"

Lighting

Lamp Size: 84"
Lamp Qty: 2
Power Supply Qty: 1

TDB-CRP-24X85 14.17 sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Vinyl to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



ORIGINAL PHOTOGRAPH



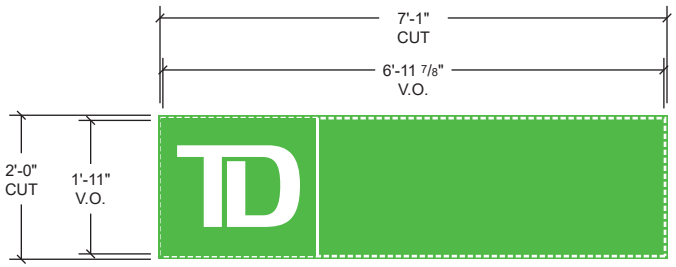
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E04

Existing Signage:
Illuminated Wall Sign
Overall: 2’-1/2” tall 7’-1” wide 8” deep
Square Footage: 14.5 sq.ft.

SPECIAL CONDITIONS

No special conditions.



FRONT VIEW Scale- 3/8”=1’-0”

Lighting

Lamp Size: 84”
Lamp Qty: 2
Power Supply Qty: 1

TDB-CRP-24X85 14.17 sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Vinyl to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



ORIGINAL PHOTOGRAPH - SIDE A



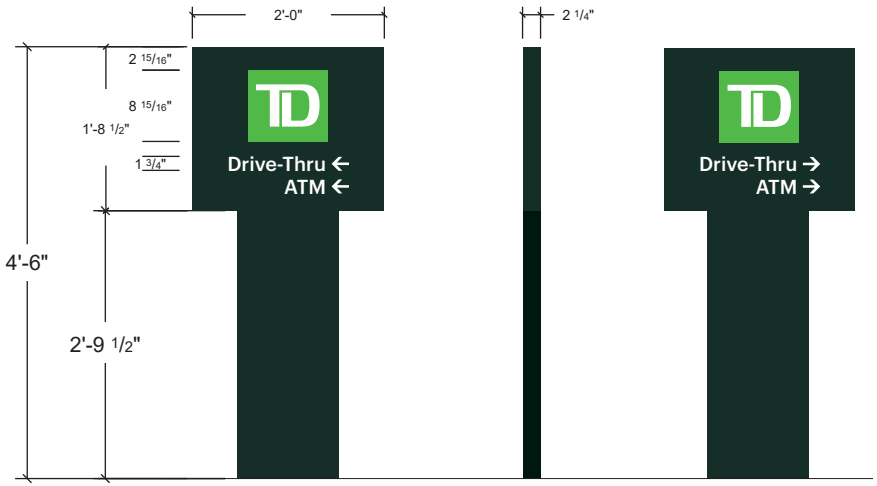
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E05

Existing Signage:
Illuminated/Non-Illuminated Directional
Overall: 3'-6" tall 2'-1" wide
Square Footage: 7.3 sq.ft.

SPECIAL CONDITIONS

Turn off power at breaker, cap off existing power, and replace with new directional



SIDE A **SIDE VIEW** **SIDE B**

Scale- 1/2"=1'-0"

TD-D.0004-X

4.33 sq.ft.

Non-illuminated painted directional sign with film decorated sign face. Aluminum tube frame and aluminum sheet construction. Sign to be painted to match: PMS 5535 #MP62874V1.0 (Satin Finish). Sign face first surface film 3M 5000 Scotchlite Reflective White Vinyl and 3M IJ680-10 Scotchlite Reflective Film (InkJet Digital) to match Matthews Pantone 361 with 3M MCS approved inkjet inks.



ORIGINAL PHOTOGRAPH - SIDE B



ORIGINAL PHOTOGRAPH

RETAIN EXISTING SIGNAGE

E19-E22

Existing Signage:
Blade Sign
Overall: 1'-3 1/2" tall 1'-0" wide
Square Footage: 1.29 sq.ft.

SPECIAL CONDITIONS

No special conditions.



ORIGINAL PHOTOGRAPH



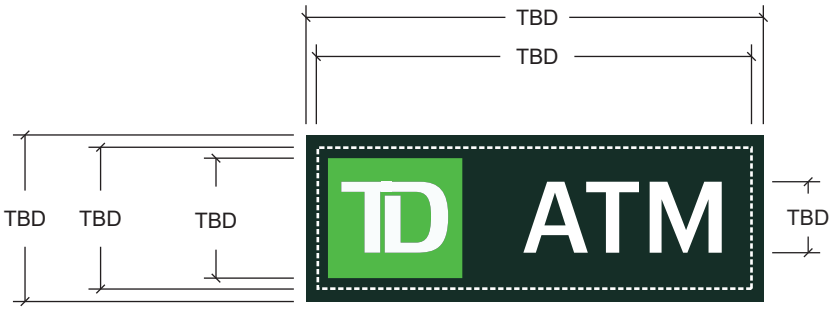
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

F01

Existing Signage:
Illuminated ATM Header
Overall: TBD tall TBD wide TBD deep
Square Footage: TBD sq.ft.

SPECIAL CONDITIONS

Technical Survey Required prior to manufacture.



FRONT VIEW Scale- 3/8”=1’-0”

Lighting

Please photograph inside of sign during technical survey
Lamp Size: _____”
Lamp Qty: _____
Power Supply Qty: X

TDB-CRP-TBDXTBD TBD sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Background to be 3M 3632-6513 Translucent Dark Green Vinyl applied to first surface. Logo to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



E01 / Side A / West



E01 / Side B / East



E02 / Side A / West



E03 / Side A / North



E04 / Side A / East



E05 / Side A / North



E05 / Side B / South



E12 / Side A / East



F01 / Side A / South

/ /

/ /

/ /



EXISTING SITE PHOTOGRAPH

Site Recommendation Book

Arlington ID #: 1021
880 Massachusetts Avenue
Arlington, MA

Preliminary Recommendations
July 22, 2019

Revisions
November 13, 2019
November 20, 2019
December 17, 2019
April 21, 2020
April 29, 2020

IMAGE RESOURCE GROUP BRINGING DESIGN TO REALITY
130 Pinnacle Point Ct., Columbia, SC 29223, P: 803-790-2121 F: 803-790-2125 Company Website: www.imageresourcegroup.com Project Management Website: www.irgpm.com

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- Directional Signs: All directional signs are to coordinate with any marking on the pavement, If new directional signage counteracts the current flow of traffic, remain on site until you have reviewed next steps with your IRG Project Manager. Any existing electrical must be powered down and made safe, then hidden below ground level consistent with regulations. Immediately notify IRG of damaged landscaping found or created by sign removal/installation
- Acrylic/Plate Lettersets: Retained letters are to be wiped down, and completion photos should include the entire letterset.
- Awnings: Completion photos are to include all recovered awnings, applied graphics, and enough surrounding area to confirm the location of each.
- Restoration & Painting: Completion photos are to include close up photos and enough surrounding area to confirm the location of the impacted area.



Site Plan



ORIGINAL PHOTOGRAPH

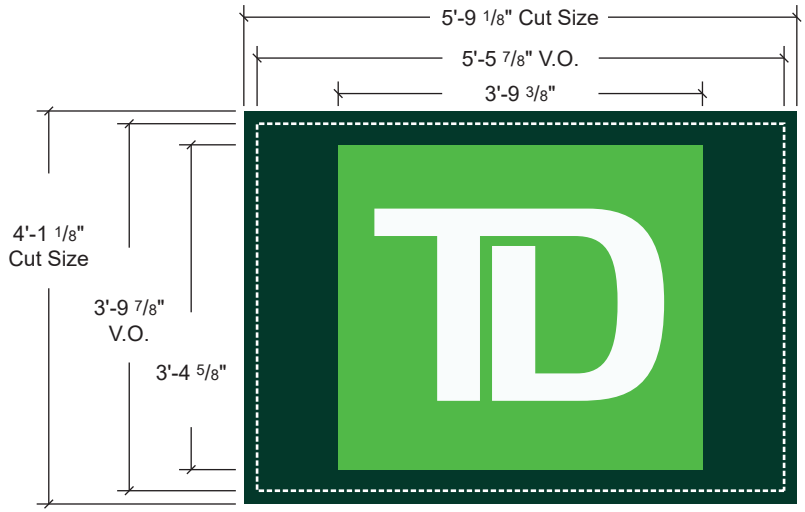

COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E01

Existing Signage:
D/F Non-Illuminated Pylon
Overall: 4'-2" tall 5'-10" wide 1'-2" deep
Square Footage: 24 sq.ft.

SPECIAL CONDITIONS

No special conditions.



FRONT VIEW
Scale- 1/2"=1'-0"

TDB-RP-FS.0002 **Qty 2** 24.05 sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Background to be 3M 3630-6513 Translucent Dark Green Vinyl applied to first surface. Logo to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



MFG NOTE
Any seams in vinyl to be located at bottom of T Crossbar



ORIGINAL PHOTOGRAPH



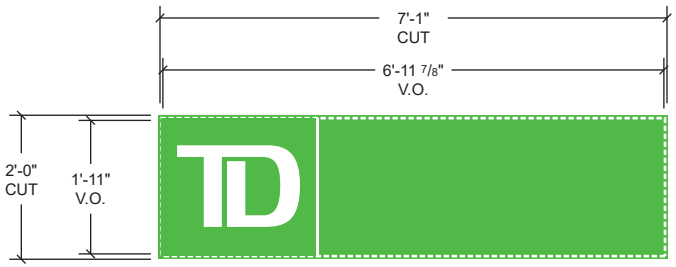
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E02

Existing Signage:
Illuminated Wall Sign
Overall: 2'-1/2" tall 7'-1" wide 8" deep
Square Footage: 14.5 sq.ft.

SPECIAL CONDITIONS

No special conditions.



FRONT VIEW Scale- 3/8"=1'-0"

Lighting

Lamp Size: 84"
Lamp Qty: 2
Power Supply Qty: 1

TDB-CRP-24X85 14.17 sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Vinyl to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



ORIGINAL PHOTOGRAPH



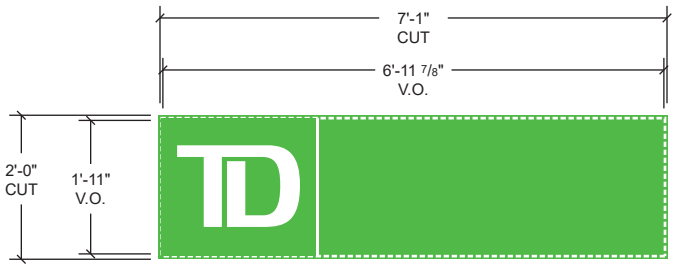
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E03

Existing Signage:
Illuminated Wall Sign
Overall: 2’-1/2” tall 7’-1” wide 8” deep
Square Footage: 14.5 sq.ft.

SPECIAL CONDITIONS

No special conditions.



FRONT VIEW Scale- 3/8”=1’-0”

Lighting

Lamp Size: 84”
Lamp Qty: 2
Power Supply Qty: 1

TDB-CRP-24X85 14.17 sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Vinyl to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



ORIGINAL PHOTOGRAPH



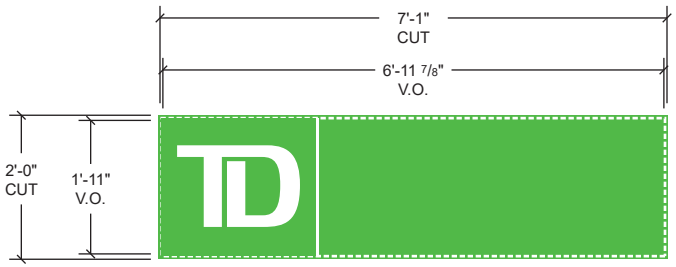
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E04

Existing Signage:
Illuminated Wall Sign
Overall: 2’-1/2” tall 7’-1” wide 8” deep
Square Footage: 14.5 sq.ft.

SPECIAL CONDITIONS

No special conditions.



FRONT VIEW Scale- 3/8”=1’-0”

Lighting

Lamp Size: 84”
Lamp Qty: 2
Power Supply Qty: 1

TDB-CRP-24X85 14.17 sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Vinyl to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



ORIGINAL PHOTOGRAPH - SIDE A



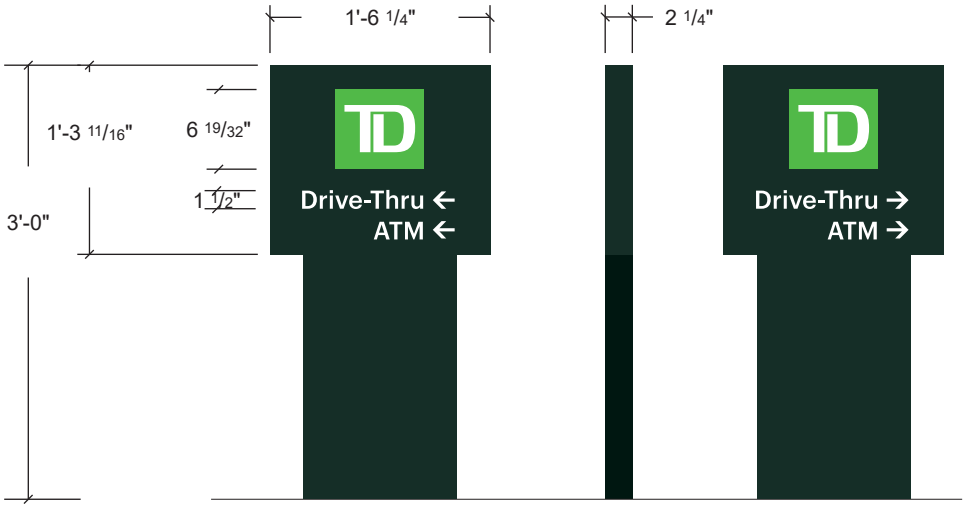
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

E05

Existing Signage:
Illuminated/Non-Illuminated Directional
Overall: 3'-6" tall 2'-1" wide
Square Footage: 7.3 sq.ft.

SPECIAL CONDITIONS

Turn off power at breaker, cap off existing power, and replace with new directional



SIDE A **SIDE VIEW** **SIDE B**

TD-D.0004-T-2sqft

Scale- 3/4"=1'-0"

1.99 sq.ft.

Non-illuminated painted directional sign with film decorated sign face. Aluminum tube frame and aluminum sheet construction. Sign to be painted to match: PMS 5535 #MP62874V1.0 (Satin Finish). Sign face first surface film 3M 5000 Scotchlite Reflective White Vinyl and 3M IJ680-10 Scotchlite Reflective Film (InkJet Digital) to match Matthews Pantone 361 with 3M MCS approved inkjet inks.



ORIGINAL PHOTOGRAPH - SIDE B



ORIGINAL PHOTOGRAPH

E19-E22

Existing Signage:
Blade Sign
Overall: 1'-3 1/2" tall 1'-0" wide
Square Footage: 1.29 sq.ft.

SPECIAL CONDITIONS

No special conditions.

RETAIN EXISTING SIGNAGE



ORIGINAL PHOTOGRAPH



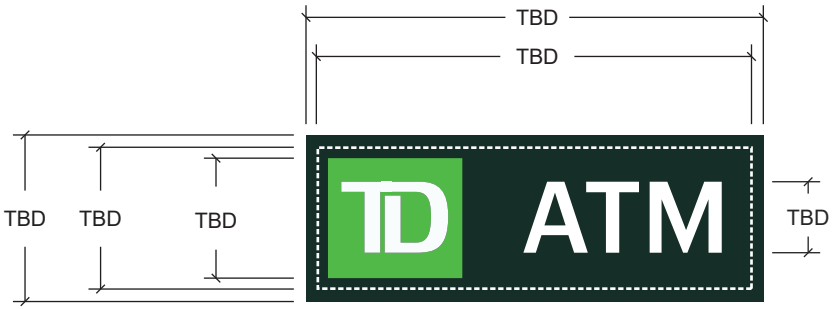
COMPOSITE PHOTOGRAPH with PROPOSED SIGNAGE

F01

Existing Signage:
Illuminated ATM Header
Overall: TBD tall TBD wide TBD deep
Square Footage: TBD sq.ft.

SPECIAL CONDITIONS

Technical Survey Required prior to manufacture.



FRONT VIEW Scale- 3/8”=1’-0”

Lighting

Please photograph inside of sign during technical survey
Lamp Size: _____”
Lamp Qty: _____
Power Supply Qty: X

TDB-CRP-TBDXTBD TBD sq.ft.

.177" thk Makrolon sl #7328 (B54) polycarbonate. Background to be 3M 3632-6513 Translucent Dark Green Vinyl applied to first surface. Logo to be 3M 3630-5741 TD Light Green Translucent Vinyl laminated with 3M 3660M applied to the first surface. Copy to be dropped out to illuminate white.



E01 / Side A / West



E01 / Side B / East



E02 / Side A / West



E03 / Side A / North



E04 / Side A / East



E05 / Side A / North



E05 / Side B / South



E12 / Side A / East



F01 / Side A / South

/ /

/ /

/ /

KRATTENMAKER O'CONNOR & INGBER P.C.

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CHARLES G. KRATTENMAKER, JR.
MARY WINSTANLEY O'CONNOR
KENNETH INGBER

OF COUNSEL: RAYMOND SAYEG

May 11, 2020

Jennifer Raitt, Director
Department of Planning and Community
Development
Town of Arlington
730 Massachusetts Avenue
Arlington, MA 02476

Re: 1207-1211 Massachusetts Avenue, Arlington, MA (collectively referred to as the "Property") / Docket No. 3602

Dear Director Raitt:

As discussed with Erin Zwirko, Assistant Director, I am providing this letter to address various issues raised with respect to the application of the Town of Arlington Zoning Bylaw, last amended by Town Meeting on April 22, 2019 (hereinafter referred to as the "Bylaw").

- Use of the Property

The Property is proposed to be a Mixed-Use project as required by the RFP issued by the Town. The proposal is a restaurant and hotel use. The Bylaw defines "Mixed-Use" as "a combination of two or more distinct land uses, such as commercial, lodging, research, cultural, artistic/creative production, artisanal fabrication, residential in a single multi-story structure to maximize space usage and promote a vibrant, pedestrian-oriented live work environment." Bylaw, Article 2, Section 2.

The use is not a residential use or a "dwelling". "Dwelling" is defined in the Bylaw as follows:

> A privately or publicly owned permanent structure, whether owned by one or more persons or in condominium, or any other legal form which is occupied in whole or part as the home residence or sleeping place of one or more persons. The terms "efficiency," "single-family," "two-family," "duplex,' "three-family" or "multi-family" dwelling, or single-room occupancy building, shall not include hotel/motel, bed and breakfast, hospital, membership club, mixed-use, or mobile home. (emphasis supplied).

Bylaw, Article 2, Section 2. The definition of "Dwelling" excludes "hotel/motel" use, among other uses. The definition of this use is relevant to the detention of FAR.

- Bonus FAR

Article 5, Section 5.3.6 references the exceptions to the maximum floor area ratio regulations or the "bonus" FAR, so-called.

Section 5.3.6A specifically authorizes the ARB to grant a special permit subject to the standards contained in Section 3.3 or 3.4, as applicable, to allow a maximum gross floor area higher than is permitted in the district subject to the requirements set out at 5.3.6A(1)-(3).

This proposal satisfies requirements 5.3.6A(1) and (2).

5.3.6C sets out the additional gross floor area or bonus FAR permitted.

The petitioner is proposing "public access" space, which will provide for a public art and presentation area located in the front right area of the Property. As such, the Property, two lots which are being aggregated with the B-4 use the larger use, is entitled to a 10% increase in FAR.

The proposal satisfies this requirement.

- Setback Dimensions

The minimum lot frontage required for this use under the Bylaw is fifty (50) feet. Bylaw, Article 5, Section 5-26.

The Bylaw does not require a front yard and/or side yard setback. The rear yard setback is 24' 6", which satisfies the Bylaw. Bylaw, Article 5, Section 5.27.

A question was raised as to whether the project has frontage on Clarke Street. There is no frontage on Clarke Street and, in any event, even if there were, no minimum setback is required. Moreover, under Article 5, Section 5.3.16, the ARB has the ability to adjust the required setbacks in the issuance of a special permit.

- Parking

The Bylaw requires that in a Mixed-Use project, the number of parking spaces required is the sum of uses computed separately. Bylaw, Article 6, Section 6.1.4. The proposed hotel is fifty (50) rooms, which would require fifty (50) spaces – one space per room. A restaurant use in a hotel requires one space per 400 sq. feet of restaurant space. Bylaw, Article 6, Section 6.1.4.

A combination of the two uses would be a total of fifty-six (56) spaces.

Under Article 6, Section 6.1.5, the ARB has the authority to reduce parking in Business zones to 25 percent of that required in the Table of Off-street Parking Regulations if the proposed parking is deemed adequate and where Transportation Demand Management Practices are proposed.

The petitioner suggests the proposed parking is indeed adequate and has proposed a Transportation Demand Management Plan. As such, Article 6, Section 6.1.5(A) and (C)(1), (6) and

(8) apply, enabling the ARB to reduce the parking to fourteen (14) spaces. Here, the petitioner seeks a reduction to only fifty (50) percent of the parking required or twenty-eight (28) spaces.

- Upper Story Setback

Article 5, Section 5.3.16 specifically vests the ARB with the authority to grant an adjustment to "the required setbacks set forth elsewhere in this Bylaw to account for specific conditions unique to the proposal."

This section of the Bylaw enables the ARB to eliminate or reduce the 7.5 foot setback referenced in Article 5, Section 5.3.17.

The petitioner suggests that the conditions unique to this proposal are the development of a mixed-use project, which contains a boutique hotel on substantially unimproved lots. In order to be successful, there must be adequate room revenue. Moreover, the ARB may consider the setback of the entire building of 23' 3" on the first level and 18' 8" on the second level from the front property line. The petitioner suggests that the setback of the building satisfies the spirit and intent of Article 5, Section 5.3.17.

Moreover, the petitioner would suggest that also unique to this proposal is the fact that this Mixed-Use project, to be located on B-2 and B-4 zoned lots, will convert a vehicular-oriented business district lot to an aesthetically pleasing mixed-use development that will provide amenities for the Town. The Bylaw, in fact, encourages the conversion of B-4 uses "to other retail, service, office, or residential uses, particularly as part of a mixed-use development. (emphasis supplied) Bylaw, Article 5, Section 5.5.1(E).

In the event you would like to discuss this matter, please do not hesitate to contact me. I thank you.

Very truly yours,

Mary Winstanley O'Connor

MWO/ccg
6214

Town of Arlington, Massachusetts
Department of Planning & Community Development
730 Massachusetts Avenue, Arlington, Massachusetts 02476

Public Hearing Memorandum

The purpose of this memorandum is to provide the Arlington Redevelopment Board and public with technical information and a planning analysis to assist with the regulatory decision-making process.

To: Arlington Redevelopment Board

From: Jennifer Raitt, Secretary Ex Officio

Subject: Environmental Design Review, 1207-1211 Massachusetts Avenue, Arlington, MA Docket #3602

Date: May 14, 2020

This memo is provided as an update to the last memo provided on January 21, 2020. The following items have been requested and remain outstanding in relation to this application:

1. The Board requested an improved traffic study with a focus on Mass Ave, Lowell, Appleton, Forest, and the neighborhood adjacent to the project site, to determine how the use may impact circulation in the area, and to complete the study when school is in session (this last item is now hindered by the COVID-19 pandemic).

2. Provide updated plans or documents showing the following items:
 a. Offsite shared parking agreement for employees;
 b. Offsite shared parking agreement for tour buses;
 c. Passenger and delivery loading and unloading, including showing the turning radius onto Clark Street from the project site;
 d. Floor area ratio (FAR) calculation for the building, bonus, and open space;
 e. Updated shadow study and updated elevations based upon a topographical study and site survey.
 f. Plans for sidewalk upgrades adjacent to the curb cut on Clark Street.
 g. Elimination or revision to secondary signage on Clark Street.
 h. A detailed exterior lighting plan.

Town of Arlington
Legal Department

Douglas W. Heim
Town Counsel

50 Pleasant Street
Arlington, MA 02476
Phone: 781.316.3150
Fax: 781.316.3159
E-mail: dheim@town.arlington.ma.us
Website: www.arlingtonma.gov

To: Arlington Redevelopment Board; Jennifer Raitt, Director of Planning and Community Development

From: Douglas W. Heim, Town Counsel

Date: May 13, 2020

Re: Docket No. 3602

Members of the Arlington Redevelopment Board ("ARB"), I write with respect to the Special Permit Application for 1207-1211 Massachusetts Avenue, Docket No. 3602, on two scores. First, with respect to the application Section 5.3.17 of the Zoning Bylaw, there is a substantial error in the Zoning Bylaw. While the genesis of this error remains unclear, the present Section 5.3.17 was not approved by Town Meeting in 2016 when upper story step backs were adopted into what was then Article 6 of the Zoning Bylaw "Dimensional and Density Regulations."

Second, with respect to the correspondence from Attorney Winstanley-O'Connor, I confirm that while under no obligation to do so, the Board possesses the discretion to afford both "bonus FAR" consideration under Section 5.3.6 of the Zoning Bylaw, and adjust required setbacks under discretion conferred by Section 5.3.16; however within the limitations and requirements set forth in those sections respectively.

Section 5.3.17 Bylaw Error

Foremost, it has come to the attention of this Office that the version of Section 5.3.17 in the present Zoning Bylaw available on the Town's website is incorrect. In short, the provision regarding upper story step backs should apply beginning at the fourth story, not the third. The provision regarding "upper story step backs" was first enacted under Article 6 of the 2016 Annual Town Meeting. The relevant portion of Article on 6 before Town Meeting (addressing mixed-use in business and industrial districts in a number of ways) was then listed as a new "Section 6.285" (prior to the 2018 Recodification of the Zoning Bylaw and re-numeration as section 5.3.17). It was recommended in the 2016 Report of the ARB and voted upon by Town Meeting as follows:

> (Adding) Section 6.285 Upper Story Building Step Backs
>
> For buildings in excess of three (3) stories in height, an additional seven and one half (7.5) foot step back (upper story building setback) **shall be provided beginning at the fourth (4th) story.** The upper story stepback shall be provided along all building elevations with street frontage, excluding alleys.

Emphasis added. *See Certified Vote on Article 6 of the 2016 Town Meeting* (attached hereto).

That same vote was submitted to the Attorney General's Municipal Law Unit for review, and approval was given on or about September 1, 2016.[1] However, the version that was eventually included in the Revised 2016 Zoning Bylaw incorrectly read as follows:

> Section 6.285 Upper Story Building Step Backs
>
> For buildings more than three stories in height, an additional 7.5-foot step-back (upper story building setback) shall be provided **beginning at the third story level or 30 feet above grade**, whichever is less. The upper story step-back shall be provided along all building elevations with street frontage, excluding alleys.

Emphasis added.

[1] Following the Attorney General's Office initial approval, a separate but significant scrivener's error relative to 2016 Article 6's amendments on minimum lot size within a table was noticed by resident Christopher Loreti resulting in a correction to the Town Clerk's previous submission. Within the correspondence and correction forms submitted by this Office to the Municipal Law Unit, the correct certified vote including the correction version of Section 6.285 was again submitted. The Municipal Law Unit subsequently affirmed its prior decision with the correction on minimum lot size.

Indeed the erroneous provision was and is incongruous with the Building Height and Floor Area Ratio Regulations that references upper story step backs (currently codified in the Zoning Bylaw in section 5-29). This error was carried forward to the Recodified Zoning Bylaw in 2018, where the erroneous provision left unchanged beyond altering its placement in the bylaw and citation number to 5.3.17. In submissions to both Town Meeting and the Attorney General's Office, no alterations of the former Section 6.285 were noted, including the "Guide to Arlington Zoning Bylaw Recodification" where "[n]o change in wording" was noted. *See February 12, 2018 Special Town Meeting Vote on Article 2*; and *December 14, 2017 Guide to Arlington Zoning Bylaw Recodification* p. 10, (attached hereto).

As noted above, the cause of this error is unclear given that accurate votes were recorded by the Clerk and such votes were transmitted to the Attorney General's Office. Upon information and belief, it seems likely that it represents a prior version contemplated by the Department of Planning and Community Development, the ARB, or both in formulating a final recommendation to the 2016 Annual Town Meeting, which was then inadvertently placed in the revised Zoning Bylaw in lieu of the final version.

Whatever the case may be, c. 40A section 5 requires that a change to the Zoning Bylaw be properly noticed in a town meeting warrant, noticed for a hearing before a planning board, approved by Town Meeting, and approved by the Attorney General's Office before meeting the posting requirements of G.L. c. 40 sec. 32. Because neither Town Meeting nor the Attorney General's Office approved the language presently set forth in section 5.3.17, that version upper story step back requirement is not valid.

The correct language voted upon by the 2016 Annual Town Meeting highlighted above however was noticed, approved by Town Meeting, and approved by the Attorney General's Office. The only question remaining therefore is whether or not it was properly posted in compliance with c. 40 sec. 32.[2] If not, it is my recommendation that the corrected provision be either posted in public locations in each precinct of the Town, or advertised in the newspaper for two consecutive weeks. Regardless, absent special circumstances not presented here, zoning amendments are retroactive to the date of their approval by Town Meeting. Therefore, the Board

[2] Given present working conditions, I have not yet been able to confirm the language in the legal advertisement notifying the public of approved bylaw changes within the Clerk's Office archives.

may in good faith apply the correct version of section 5.3.17 to Docket No. 3602 – the version that was approved under Article 6 of the 2016 Town Meeting , but posting requirements must still be met as soon as possible.

ARB Authority Relative to FAR & Setbacks

Briefly, this Office is in receipt of Attorney Winstanley-O'Connor's letter asserting that the ARB has the authority to both afford additional flexibility for minimum floor area ratio and setback requirements under Zoning Bylaw sections 5.3.17 respectively. This Office affirms such authority being vested within the ARB, and further notes that such discretion is consistent with Section 1.2, which, in commenting upon the nature of environmental design review, sets forth as one purpose of the Bylaw as "to achieve optimum environmental quality through review and cooperation by the use of incentives, bonuses and design review."

However, as the Board knows, in both instances specific findings are required set forth in both such sections. Moreover, FAR exceptions may not exceed percentages in certain districts in per Section 5.3.6(c). Further, the Board must make findings as to specific conditions unique to the proposal should it be inclined to adjust setback requirements under Section 5.3.16. It is entirely within the Board's sound judgment to determine whether such criteria are met and requested or suggested relief appropriate.

OFFICE OF THE TOWN CLERK
TOWN OF ARLINGTON
730 MASSACHUSETTS AVENUE
ARLINGTON, MA 02476

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MONDAY, TUESDAY &WEDNESDAY
8 A.M. TO 4 P.M.
THURSDAY - 8 A.M. TO 7 P.M.
FRIDAY - 8 A.M. TO 12:00 P.M.

TELEPHONE
(781) 316-3070

STEPHANIE L. LUCARELLI
TOWN CLERK

ARTICLE 2 **ZONING BYLAW AMENDMENT/ RECODIFICATION**

VOTED: DECLARED 2/3RD , (QUORUM PRESENT - MORE THAN 85 TMM PRESENT AND VOTING)
(Electronic Vote - Yes - 148, No - 35)

1. re-organizing, re-positioning, re-captioning and re-numbering portions of the Zoning Bylaw to enhance accessibility and adaptability;

2. updating and clarifying the purpose and authority of the Zoning Bylaw to clearly state the Town's legal and factual premises for zoning regulations;

3. improving definitions to more clearly describe zoning districts, uses, and requirement;

4. providing greater consistency with present State law;

5. eliminating redundant or unnecessary provisions; making amendments such as correcting spelling and typographical errors, and eliminating or updating out dated statutory references;

6. revising, re-organizing and clarifying Zoning Bylaw administrative provisions; and

7. making other amendments for clarification and consistency;
and by taking the following actions:

1. Deleting in their entirety the following provisions and all their subparts of the existing Zoning Bylaw:

 Article 1: Title, Authority, and Purpose;
 Article 2: Definitions;
 Article 3: Establishment of Districts;
 Article 4: Interpretation and Application;
 Article 5: Use Regulation;
 Article 6: Dimensional and Density Regulations;
 Article 7: Signs;
 Article 8: Off- Street Parking and Loading Regulations;
 Article 9: Nonconforming Uses, Structures, and Lots;
 Article 10: Administration and Enforcement;
 Article 11: Special Regulations;
 Article 12: Amendment, Validity, and Effective Date; and

2. Substituting the following provisions and their subparts in the document entitled "Proposed Amended Zoning Bylaw, dated December X, 2017" on file in the office of the Town Clerk and the Department of Planning and Community Development:

Section 1	Purpose and Authority;
Section 2	Definitions;
Section 3	Administration and Enforcement;
Section 4	Establishment of Districts;
Section 5	District Regulations/
Section 6	Site Development Standards;
Section 7	Special Permits;
Section 8	Special Regulations;

3. And by taking any action related thereto.

A true copy of the vote under
Article 2 of the Warrant for the
Special Town Meeting of the
Town of Arlington at the session
held February 12, 2018

ATTEST:

Town Clerk

Guide to Arlington Zoning Bylaw Recodification

Prepared by the Zoning Recodification Working Group December 14, 2017

Introduction: This guide is a companion to the "Hearing Draft, Proposed Revision of the Arlington Zoning Bylaw December 14, 2017" to describe in detail where and why sections on the existing Zoning Bylaw were moved or edited.

The scope of the revision is a recodification, reorganization, and updating of the bylaw. The goals of this recodification effort are to: (1) create a document that is easy for users to navigate; (2) simplify and update the language of the Bylaw wherever possible without losing the meaning or intent of the Bylaw; and (3) provide a structure that is both predictable and flexible enough to accommodate amendments over time. In addition, recodification ensures the Bylaw is consistent with internal and external laws and regulations, e.g. conformance with Massachusetts General Law Chapter 40A The Zoning Act and Arlington Conservation Commission Regulations.

This guide consists of a table organized to be reviewed by row; each row represents a section of the bylaw. Along each row there are five columns. The first two columns identify the section and title of provisions in the current zoning bylaw. The third column identifies the corresponding section in the revised zoning bylaw. The fourth column summarizes proposed changes. The fifth column explains the purpose for the amendment, such as to make the bylaw easier to understand and use, or to make it consistent with local or state laws or regulations. A detailed explanation of proposed amendments to the Definitions section begins on page 22.

The first Arlington Redevelopment Board Public Hearing on the Hearing Draft of the Zoning Bylaw will be on **Monday, January 8, 2018 at 8:00 p.m.** Any questions may be directed to the Department of Planning and Community Development at 781-316-3090 or zoningrecod@town.arlington.ma.us.

Existing Zoning Bylaw Section	Existing Zoning Bylaw Title	Proposed Zoning Bylaw Section	Amendment Summary	Amendment Purpose
6.23	**Traffic Visibility for Driveways**	**5.3.12(B)**	No change in wording.	Usability
6.24	**Accessory Underground Structures**	**5.3.13**	No change in wording.	Usability
6.25	**End Yards for Town House Structures**	**5.3.14**	Edited but unchanged.	Usability
6.26	**Buildings of Uneven Height or Alignment**	**5.3.15**	No change in wording.	Usability
6.27	**Yards or Setbacks for Lots Adjoining a Street or Public Open Space**	**5.3.16**	No change in wording.	Usability
6.28	**Planned Unit Development Yards and Setbacks**	**5.6.2**	In table footnote B	Usability
6.285	**Upper Story Building Step Backs**	**5.3.17**	No change in wording.	Usability

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STEPHANIE L. LUCARELLI
TOWN CLERK

TELEPHONE
(781) 316-3070

ARTICLE 6 **ZONING BYLAW AMENDMENT/MIXED USE IN BUSINESS BUSINESS AND INDUSTRIAL ZONES**

VOTED: **DECLARED 2/3RD, (QUORUM PRESENT - MORE THAN 85 TMM PRESENT AND VOTING)**

(ELECTRONIC TALLY, YES - 187, NO - 35)

That the Zoning Bylaw be and hereby is amended by:

Amending Article 2, Definitions, Section 2.01 General with the following text changes:

Following the definition of "ARB":

Artisanal Fabrication:

Production of goods by the use of hand tools or small-scale, light mechanical equipment occurring solely within an enclosed building where such production requires no outdoor operations or storage, and where the production, operations, and storage of materials related to production occupy no more than 5,000 square feet of gross floor area. Typical uses have minimal negative impact on surrounding properties and include, but are not limited to, woodworking and cabinet shops, ceramic studios, jewelry manufacturing and similar types of arts and crafts, production of alcohol, or food processing.

Artistic/Creative Production:

Creation, production, manufacture, distribution, publishing, rehearsal, performance, broadcast, selling, or teaching of the visual arts, performing arts, applied arts, literature, heritage, media, music, information technology, communications media, or digital content & applications; or the invention, design, prototyping, or fabrication, assembly, and packaging of parts for further assembly or consumer goods for sale.

...

Following the definition of "Building, Setback Line":

Building Step Back:

Upper story building setback provided along all building elevations with street frontage, excluding alleys.

...

Following the definition of "Membership Club":

I hereby certify the foregoing to be a TRUE COPY from the records of the Town Clerk's Office, Arlington Massachusetts.

ATTEST Stephanie L. Lucarelli
TOWN CLERK

Mixed-use:

A Combination of two or more distinct land uses, such as commercial, lodging, research, cultural, artistic/creative production, artisanal fabrication, residential in a single multi-story structure to maximize space usage and promote a vibrant, pedestrian-oriented live-work environment.

...

Amending Article 3, Establishment of Districts, Section 3.02 Description of Zoning Districts, by adding the following underlined sentences or phrases.

B1 - Neighborhood Office District

The Neighborhood Office District is composed of all those areas so designated on the official zoning map. Predominant uses include one- and two-family residences, houses with offices on the ground floor, or office structures which are in keeping with the scale of adjacent houses. With most locations on or adjacent to Massachusetts Avenue, the district is intended to encourage preservation of small-scale structures to provide contrast and set off the higher density, more active areas along the Avenue. Uses which would detract from the desired low level of activity, consume large amounts of land, or otherwise interfere with the intent of this bylaw, are discouraged. Mixed-use structures without retail space are allowed in this district.

B2 - Neighborhood Business District

The Neighborhood Business District is composed of all those areas so designated on the official zoning map. Predominant uses include small retail and service establishments serving the needs of adjacent neighborhoods and oriented to pedestrian traffic. Locations are almost all along Massachusetts Avenue or Broadway. Uses which would detract from this small-scale business character, or otherwise interfere with the intent of this bylaw are discouraged. Mixed-use structures are allowed in this district.

B2A - Major Business District

The major Business District is composed of all those areas so designated on the official zoning map. Located along Massachusetts Avenue, Mill Street, Summer Street and Broadway, these areas generally contain uses that are retail and service to serve the needs of a large neighborhood area. Customers generally arrive by car so there is ample parking to serve the retailer. Housing is also permitted at a medium density due to the proximity of the zone to residential uses. Mixed-use structures are allowed in this district. Automotive uses; some office uses, wholesale business and storage uses are prohibited.

B3 - Village Business District

The Village Business District is composed of all those areas so designated on the official zoning map. Predominant uses include retail, service and office establishments catering to both convenience and comparison-goods shoppers and oriented to pedestrian traffic. Mixed-use structures are allowed and encouraged in this district. The three locations include portions of the principal business areas of Arlington: Lake Street, Arlington Center, and Arlington Heights. Businesses which consume large amounts of land and activities

which interrupt pedestrian circulation and shopping patterns or otherwise interfere with the intent of this bylaw are discouraged.

B4 - Vehicular Oriented Business District

The Vehicular Oriented Business District is composed of all those areas so designated on the official zoning map. Uses include establishments primarily oriented to automotive traffic which require large amounts of land in proportion to building coverage; or establishments devoted to the sale or servicing of motor vehicles, the sale of vehicular parts and accessories, and service stations. Arlington has an overabundance of automotive and automotive accessory sales and service establishments; thus when one of these businesses closes, the conversion of the property to other retail, service, office or residential use is encouraged, particularly as part of mixed-use development, which is allowed in this district.

B5 - Central Business District

The Central Business District is composed of all those areas so designated on the official zoning map in Arlington Center. It includes retail, service, and office uses, and provides for large-scale development. The scale is intended to reinforce the Center's role as the focus of activity in Arlington. Mixed-use development is encouraged, such as the combining of residential and business uses. Activities shall be oriented to pedestrian traffic and to centralized parking. Businesses which consume large amounts of land and interrupt pedestrian circulation and shopping patterns or otherwise interfere with the intent of this bylaw are discouraged.

I - Industrial District

The Industrial District is composed of all those areas so designated on the official zoning map. These areas in the Mill Brook Valley allow uses requiring the manufacture, assembly, processing or handling of materials which because of their traffic, noise, appearance, odor, or hazards would be disruptive to residential and other business uses. Residential uses, retail business uses, or uses which would otherwise interfere with the intent of this bylaw are discouraged. Mixed-use development is allowed in this district, without residential space.

...

Amending Section 4.04 – Mixed-use Multiple Business Uses

Other than mixed-use in cases of multiple business uses on a single lot, the regulation for each use shall apply to the portion of the building or land so used.

...

Amending Section 5.04 Table of Use Regulations

Note: Yes - permitted as a right SP - special permit Blank - not permitted

SECTION 5.04 - TABLE OF USE REGULATIONS

SECTION 5.04 - TABLE OF USE REGULATIONS (Continued)

		District																		
	Principal Use	R0	R1	R2	R3	R4	R5	R6	R7	B1	B2	B2A	B3	B4	B5	MU	PUD	I	T	OS
6.23	Technical Offices including offices with: extensive data processing facilities; laboratories and testing facilities; or offices with minor assembly or fabrication activities provided that the activities occupy no more than 25 percent of the floor area. For uses in this category any noise, gas, odor, bright light, dust, vibration or electro-magnetic radiation shall be confined within a building						SP	SP	SP	SP	SP	SP	SP	SP	SP		SP		SP	
ART. 6, ATM 4/14																				
7.10	Medical Marijuana Treatment Center Permitted as such by the Arlington Board of Health												SP		SP					
7.11	**Artisanal Fabrication**									**SP**	**SP**	**SP**	**SP**	**SP**	**SP**		**SP**	**SP**	**Yes**	
7.12	**Artistic/Creative Production**									**SP**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**		**SP**	**SP**	**Yes**	
7.13	**Mixed-use**									**SP**	**SP**	**SP**	**SP**	**SP**	**SP**		**SP**	**SP**	**SP[d]**	

[d] Mixed-use in Industrial Zones shall not include residential uses.

SECTION 6.00 - TABLE OF DIMENSIONAL AND DENSITY REGULATIONS (Continued)

		Intensity of Development												
ART. 8, STM 3/85; ART. 11,ATM 4/98		Lot Requirements, Minimum [M]		Fl. Area	Lot	Minimum Lot Area per	Minimum Yard, Ft.[P]			Height Maximum		Open Space Minimum Percent of Gross Floor Area		
Dis-trict	Use	Size, Sq. Ft.	Frontage, Ft.	Ratio Maximum	Coverage Maximum Percent	Dwelling Unit, Sq. Ft.	Front[E]	Side[E]	Rear[E]	Stories	Feet[G]	Landscaped	Usable[H]	
ART. 6, ATM 5/04														
B1	Single-family detached dwelling, two-family dwelling, duplex house, three-family dwelling[QR]	6,000	60	0.75	NA	2,500	20	10	20	2-1/2	35	10%	30%	
	Mixed-use	**5,000**	**50**	**0.75**	**NA**	**2,500**	**20**	**10**	**20**	**3**	**35**	**10%**	**20%**	
	Any other permitted uses	5000	50	0.75	NA	2,500	20	10	20	3	35	10%	-	

ART. 6, ATM 5/04												
B2 Single-family detached dwelling, two-family dwelling, duplex house, three-family dwelling[QR]	6,000	60	0.75	NA	2,500	20	10	20	2-1/2	35	10%	30%
ART. 81, ATM 4/80												
Building with a principal use of townhouse structure or apt. house	5,000	50	1.00	NA	1,450	20	10	20	3	35	10%	20%
Mixed-use	**-**	**50**	**1.50**	**NA**	**1,450**	**-**	**-**	**10+(L/10)** **3**	**4[T]**	**50** **40**	**10%**	**-[H]**
	>20,000	**50**	**1.00**	**NA**	**1,450**	**0**	**0**	**10+(L/10)** **3**	**4[T]**	**50** **40**	**10%**	**-[H]**
Any other permitted use	-	50	1.00	NA	1,450	0	0	10+(L/10)	3	35	10%	-[H]

SECTION 6.00 - TABLE OF DIMENSIONAL AND DENSITY REGULATIONS (Continued)

ART. 8, STM 3/85; ART. 11,ATM 4/98		Intensity of Development												
		Lot Requirements, Minimum [M]				Minimum Lot Area per					Height		Open Space Minimum	
				Fl. Area	Lot	Dwelling	Minimum Yard, Ft.[P]			Maximum			Percent of Gross	
Dis-		Size,	Frontage,	Ratio	Coverage	Unit,							Floor Area	
trict	Use	Sq. Ft.	Ft.	Maximum	Maximum Percent	Sq. Ft.	Front[E]	Side[E]	Rear[E]	Stories	Feet[G]		Landscaped	Usable
ART.6, ATM 5/04														
B2A	Single-family detached dwelling, two-family dwelling, duplex house, three-family dwelling[QR]	6,000	60	0.75	NA	2,500	20	10	20	2-1/2	35		10%	30%
ART. 4, ATM 4/97														
	Apartment house fronting on a street with a right-of-way width of 50 feet or less	20,000	100	0.80	NA	1,450	15	10+(L/10)	30	3	35		10%	25%

Apartment house fronting on a street wider than 50 feet	20,000	100	1.20[F]	NA	700	15+(H/10)	(H+L)/6 at least 30 ft.	(H+L)/6	4	40 25	10%	20%
Mixed-use	**-**	**50**	**1.50**	**NA**	**700**	**0**	**0**	**10+(L/10)**	**5[T]**	**60**		
								4[T]		**50**		
	>20,000	**50**	**1.00**	**NA**	**700**	**0**	**0**	**10+(L/10)**	**4[T]**	**50**	**10%**	**-[H]**
								3		**40**		
Any other permitted use	-	50	1.00	NA	NA	-	-	10+(L/10)	3	35	10%	-[H]

SECTION 6.00 - TABLE OF DIMENSIONAL AND DENSITY REGULATIONS (Continued)

ART. 8, STM 3/85; ART. 11,ATM 4/98

		Intensity of Development												
		Lot Requirements, Minimum[M]		Fl. Area	Lot	Minimum Lot Area per	Minimum Yard, Ft.[P]			Height Maximum		Open Space Minimum Percent of Gross Floor Area		
Dis-trict	Use	Size, Sq. Ft.	Frontage, Ft.	Ratio Maximum	Coverage Maximum Percent	Dwelling Unit, Sq. Ft.	Front[E]	Side[E]	Rear[E]	Stories	Feet[G]	Landscaped	Usable	
ART.6, ATM 5/04														
B3	Single-family detached dwelling, two-family dwelling, duplex house, three-family dwelling[QR]	6,000	60	0.75	NA	2,500	20	10	20	2-1/2	35	10%	30%	
ART.81, ATM 4/80														
	Building with a principal use of a town house structure or apartment house	20,000	100	1.40	NA	600	15+(H/10)	(H+L)/6	(H+L)/6 3	5	60 40	10%	20%	

Mixed-use	**-**	**50**	**1.50**	**NA**	**600**	**0**	**0**	**(H+L)/6**	**5'**	**60**		
								4[T]		**50**		
	>20,000	**50**	**1.40**	**NA**	**600**	**0**	**0**	**(H+L)/6**	**5**	**60**	**10%**	**-[H]**
								3		**40**		
Any other permitted use	-	50	1.00	NA	600	-	-	(H+L)/6	5	60	20%	-
								3		40		
	20,000	100	1.40	NA	600	-	-	(H+L)/6	5	60	10%	-[H]
								3		40		

SECTION 6.00 - TABLE OF DIMENSIONAL AND DENSITY REGULATIONS (Continued)

		Intensity of Development											
ART. 8, STM 3/85; ART. 11,ATM 4/98						Minimum Lot						Open Space Minimum	
		Lot Requirements, Minimum [M]		Fl. Area	Lot	Area per				Height		Percent of Gross	
Dis-		Size,	Frontage,	Ratio	Coverage	Dwelling	Minimum Yard, Ft.[P]			Maximum		Floor Area	
trict	Use	Sq. Ft.	Ft.	Maximum	Percent	Unit, Sq. Ft.	Front[E]	Side[E]	Rear[E]	Stories	Feet[G]	Landscaped	Usable
ART.6, ATM 5/04													
B4	Single-family detached dwelling, two-family dwelling, duplex house, three-family dwelling[QR]	6,000	60	0.75	NA	2,500	20	10	20	2-1/2	35	10%	30%
	Apartment house fronting on street with a right-of-way width of 50 ft. or less	20,000	100	0.80	NA	1,450	15	10+(L/10)30		3	35	10%	25%
ART. 92, ATM 3/79													

Apartment house fronting on street wider than 50 ft.	20,000	100	1.20[F]	NA	700	15+(H/10)(H+L)/6(H+L)/6 at least 30 ft.	4	40 25	10%	20%		
Mixed-use	**-**	**50**	**1.50**	**NA**	**700**	**0**	**0**	**10+(L/10)** **4[T]**	**5[T]**	**60** **50**		
	>20,000	**50**	**1.00**	**NA**	**700**	**0**	**0**	**10+(L/10)** **3**	**4[T]**	**50** **40**	**10%**	**-[H]**
Any other permitted use	-	50	1.00	NA	NA	-	-	10+(L/10)	3	35	10%	-[H]

SECTION 6.00 - TABLE OF DIMENSIONAL AND DENSITY REGULATIONS (Continued)

		Intensity of Development												
ART. 8, STM 3/85; ART. 11,ATM 4/98		Lot Requirements, Minimum [M]		Fl. Area	Lot	Minimum Lot Area per	Minimum Yard, Ft.[P]			Height Maximum		Open Space Minimum Percent of Gross Floor Area		
Dis-trict	Use	Size, Sq. Ft.	Frontage, Ft.	Ratio Maximum	Coverage Maximum Percent	Dwelling Unit, Sq. Ft.	Front[E]	Side[E]	Rear[E]	Stories	Feet[G]	Landscaped	Usable	
ART.6, ATM 5/04														
B5	Single-family detached dwelling, two-family dwelling, duplex house, three-family dwelling[QR]	6,000	60	0.75	NA	2,500	20	10	20	2-1/2	35	10%	30%	
ART. 92, ATM 3/79; ART. 81, ATM 4/80; ART. 16, STM 3/87														
	Building with a principal use of a town house structure or apartment house	20,000	100	1.50	NA	550	15+(H/10)(H+L)/6 at		(H+L)/6 at	NA	75[N] 40	10%	15%	

							least 20 ft.	least 20 ft.					
Mixed-use	**-**	**50**	**1.80**	**NA**	**700**	**0**	**0**	**10+(L/10) 5[T] 4[T]**		**60 50**			
	>20,000	**50**	**1.40**	**NA**	**700**	**0**	**0**	**10+(L/10) 5[T] 3**		**60 40**	**10%**	**-**	
ART.5, STM 3/81													
Any other permitted use	-	50	1.40[I]	NA	600	-	-	(H+L)/6 3	5	60 40	10%	- (20% for residen-tial use)	
ART. 16, STM 3/87													
	40,000	100	1.50[I]	NA	550	-	-	(H+L)/6	NA	75[N] 40	10%	-[H]	
ART. 16, STM 3/87													
	80,000	150	1.80[I]	NA	550	-	-	(H+L)/6	NA	75[N] 40	10%	-[H]	

SECTION 6.00 - TABLE OF DIMENSIONAL AND DENSITY REGULATIONS (Continued)

		Intensity of Development											
		Lot Requirements, Minimum [M]				Minimum Lot Area per				Height		Open Space Minimum	
				Fl. Area	Lot Coverage	Dwelling	Minimum Yard, Ft.[P]			Maximum		Percent of Gross	
Dis-		Size,	Frontage,	Ratio	Maximum	Unit,						Floor Area	
trict	Use	Sq. Ft.	Ft.	Maximum	Percent	Sq. Ft.	Front[E]	Side[E]	Rear[E]	Stories	Feet[G]	Landscaped	Usable
ART. 8, STM 3/85; ART. 11,ATM 4/98													
ART.13, ATM 4/01													
I	All permitted uses	-	-	1.50	NA	NA	10[J]	10[J]	10[J]	4	52	-	-
										3	39		
	Mixed-use	**-**	**-**	**1.50**	**NA**	**NA**	**10[J]**	**10[J]**	**10[J]**	**4[T]**	**52**	**-**	**-**
										3	**39**		
ART.5, ATM 4/00													
T	Uses 4.01, 5.01, 5.05												
	5.09, 8.17	6,000	60	0.35	NA	NA	25	10	20	2-1/2	35	30%	-
ART.92, ATM 3/79, ART. 43, STM3/82													
PUD	All permitted uses	200,000[K]	-	0.80	NA	NA	(See Section 6.28)			NA[L]	85	(See Sect. 6.30)	

Mixed-use	**200,000[K]**	**-**	**0.80**	**NA**	**NA**	**(See Section 6.28)**	**NA**	**85 40**	**-**	**-**

ART. 6, ATM 5/04

[J] Not required where abutting railroad track or railroad right-of-way if railroad is to be utilized for loading or unloading.

[R] These dimensional requirements shall not apply to any special permit issued before the first advertisement of this bylaw change in February, 2004.

ART.2, STM 9/04

[S] Where a lot has slope in excess of 5%, and the development is subject to Environmental Design Review, the height of a building shall be measured from the ground immediately adjacent to a portion of the building with the same height throughout its length. The ARB may adjust the height provided there is a positive finding by the ARB that the building meets the standard of Section 11.06, f, 2., except that in no case may the height exceed the height limitation in the district by more than 20 feet.

[T] Upper Story Building Step Backs are required for structural floors over three stories, as required in Section 6.285.

Adding Section 6.285 – Upper Story Building Step Backs

For buildings in excess of three (3) stories in height, an additional seven and one half (7.5) foot step back (upper story building setback) shall be provided beginning at the fourth (4th) story. The upper story stepback shall be provided along all building elevations with street frontage, excluding alleys.

Amending Section 11.06 - Environmental Design Review

b. APPLICATION.

1. In any instance where a new structure, or a new outdoor use, or an exterior addition or a change in use a) requires a building permit, b) is subject to a special permit in accordance with Section 5.04, Table of Use Regulations, or alters the facade in a manner that affects the architectural integrity of the structure, and c) is one of the uses included in subparagraphs (a), (b), (c), (d), (e), (f), (g), ~~or (h)~~ (h), or (i) below, the aforementioned special permit shall be acted upon by the Arlington Redevelopment Board in accordance with the environmental design review procedures and standards hereinafter specified.

(a) Construction or reconstruction on a site abutting

Massachusetts Avenue

Pleasant Street

Mystic & Medford Streets between Massachusetts Avenue and Chestnut Street

Broadway

Minuteman Bikeway

(b) Six or more dwelling units on the premises, whether contained in one or more structures or on one or more contiguous lots, constructed within a two year period.

(c) Gasoline service stations.

(d) Lodging house, bed and breakfast, bed and breakfast home or a rehabilitation residence with more than 5,000 square feet of gross floor area or with 10 or more parking spaces.

(e) Nonresidential uses and hotels or motels in a nonresidential district with more than 10,000 square feet of gross floor area or with 20 or more parking spaces.

(f) Nonresidential uses in a residential district with more than 5,000 square feet of gross floor area or with 10 or more parking spaces.

(g) Outdoor uses.

(h) Temporary, seasonal signage in accordance with an overall signage plan at a fenced athletic field with one or more permanent structures to seat more than 300 persons, which signage may be in effect between March 15 and December 15 of any calendar year.

(i) Mixed-use

A true copy of the vote under
Article 6 of the Warrant for the
Annual Town Meeting of the
Town of Arlington at the session
held April 25, 2016.

ATTEST: Stephanie L. Lucarelli

Town Clerk

Town of Arlington, Massachusetts

Department of Planning & Community Development

730 Massachusetts Avenue, Arlington, Massachusetts 02476

Public Hearing Memorandum

The purpose of this memorandum is to provide the Arlington Redevelopment Board and public with technical information and a planning analysis to assist with the regulatory decision-making process.

To: Arlington Redevelopment Board

From: Jennifer Raitt, Secretary Ex Officio

Subject: Environmental Design Review, 1207-1211 Massachusetts Avenue, Arlington, MA Docket #3602

Date: January 21, 2020

Since the initial public hearing on July 22, 2019, the Department of Planning and Community Development (DPCD) staff and members of the Arlington Redevelopment Board (ARB) have provided feedback to the applicant, Jim Doherty, in relation to the above-noted Docket in different formats, including at the public hearing session, emails, and in-person meetings. This memo documents how the materials submitted by the applicant are responsive. Attached to this memo is correspondence that Attorney Winstanley-O'Connor responds to in her letter dated January 21, 2020.

1. Conduct a traffic study, with a focus on Mass Ave, Lowell, Appleton, Forest, and the neighborhood adjacent to the project site, determine how the use may impact circulation in the area, and complete the study when school is in session.

 An overview of traffic information prepared by BSC Group was submitted by the applicant. This overview provides a good basis for understanding the potential trip generation of the mixed-use structure; however, it does not include an analysis of area circulation. It also does not provide an analysis of area intersections and does not provide any recommendations on how the trips generated by the proposal may be mitigated.

 The overview by BSC Group notes that right turns onto Clark Street from the parking area will not occur as the parking will be controlled by the valet staff.

2. Show parking onsite and document any offsite parking for employees and tour buses.

 The materials provided on January 21, 2020, indicate some adjustments were made to the garage parking and the surface parking to the rear of the building to accommodate moving the dumpster away from Clark Street. In the garage, four spaces were gained by adjusting the size of the parking spaces which are complaint with the Zoning Bylaw and slighting oversized. Five spaces were reduced in surface parking to provide an adequate size drive aisle for two-way traffic and access to the dumpster. At its narrowest, the two-way drive aisle does not comply with the required 24 feet, but it is noted that access is only available to valet and other delivery services in order to minimize vehicular conflicts.

 No additional information has been provided regarding employee parking and tour bus parking. A reference to the Mill Brook Animal Clinic offering to provide additional off-site parking was made, but no formal documentation of a shared parking agreement has been provided.

3. Identify where and how passenger and delivery loading and unloading will occur, and determine whether delivery vehicles have the adequate turning radius onto Clark Street from the project site.

 As noted above, the surface parking at the rear of the site was adjusted to provide more adequate space for loading and unloading of deliveries. The materials submitted on January 21, 2020, indicate that single-unit box trucks and smaller vehicles will be making deliveries to the site at the rear of the building. Additionally the dumpster was moved from Clark Street frontage to the interior of the site. However, no documentation is provided to illustrate the turning radii of the types of vehicles that would typically enter and exit the project site to make deliveries, so the feasibility of this could not be assessed.

 The addition of the circular driveway off of Mass Ave will facilitate passenger loading and unloading outside of the public right-of-way limiting conflicts between pedestrians, bicycles, and other vehicles on Mass Ave. This is a better solution than the cut out of the sidewalk originally proposed. Outside of business hours, the circular driveway could be used for deliveries as well.

4. Provide information on the valet parking plan.

 The information provided by BSC Group indicates that all parking onsite will be controlled by valet staff and there is no self-parking. There is no information about offsite parking provided.

5. Calculate the floor area ratio (FAR) for the building and the bonus and open space.

 Exhibit A to Attorney Winstanley-O'Connor's memo is an accounting of the FAR for the building and how the bonus provisions of Section 5.3.6 apply to the proposal. Exhibit B to Attorney Winstanley-O'Connor's memo is an accounting of open space calculations.

6. Share a marketing study of similar hotels, including hotel operators, customer base, rack rates, and amenities.

 The applicant has indicated that this information is proprietary and is not relevant to the relief being sought.

7. Re-evaluate the shadow study previously submitted to consider the existing shadows and provide a comparison and determine any impact to solar arrays in the neighborhood.

 The plan set includes an updated shadow study based on the new building. The plan set also includes a shadow study documenting the existing conditions of the building and shows trees at the rear of the site.

 Two properties with solar panels have been identified as 18 Pierce Street and 24 Clark Street. The property at 24 Clark Street is beyond the reach of the proposal's shadows, but it appears that the early afternoon shadow on the Winter Solstice will affect 18 Pierce Street.

8. Submit a revised LEED Checklist and make some assumptions to bring the credits up.

 An updated LEED Checklist has been provided. The score has increased from 21 points to 52 points.

9. Show ADA accommodations in parking lot and along the Mass Ave frontage.

 One accessible parking space has been designated in the rear surface parking lot. The reference to ADA accommodations along the frontage refers to the original version of the proposal which included a cut out in the sidewalk to provide a wider shoulder for loading and unloading.

10. Show any plans for sidewalk enhancement on Clark Street.

 The plan set illustrates how the at-grade open space on the lot will be improved and activated and that a concrete sidewalk will be extended around the hotel on Clark Street. Further detail was not provided.

11. Improve the design of roof top mechanicals and kitchen venting.

 The rendering shows more roof top mechanical equipment, but no roof plan was submitted or specifications for the roof top mechanical equipment or kitchen venting. The memo from Attorney Winstanley-O'Connor indicates that the final locations will be determined at a later stage.

12. Revisit the quantity and placement of louvers on the main façade of the building.

 The louvers proposed on the façade have been eliminated.

13. Show additional bike parking at the front of the hotel.

 Parking racks are proposed on Mass Ave rather than off of Clark Street in the current plan set. Relocating the bicycle parking to the main frontage is an improvement.

14. Re-evaluate the façade elevations including the materials proposed for the façade, the hierarchy between the restaurant and hotel entrances, the sliding doors on the fourth floor of the building, windows on the Clark Street elevation, and screening for the rear deck.

 The materials proposed for the façade have been updated to reflect comments made by two members of the ARB who provided detailed feedback. The materials proposed now include brick, masonry, and clapboard panels, and the use of such materials is specified on the elevations.

 The plan set has been revised to make the hotel entrance more prominent than the restaurant entrance.

 Sliding doors are still proposed for the fourth floor hotel units.

 The Clark Street elevation has been revised.

 The rear deck has been eliminated from the proposal.

15. Re-evaluate the restaurant space planning and the location of the hotel gym.

 The plan set has been revised to show no seating or space usage in the restaurant in response to a question regarding the accuracy of the seat count. Note that while the parking requirement for restaurants is based on the seat count, in mixed-use structures such as this one, the first 3,000 square feet of space is exempt from meeting the parking requirement. The restaurant is proposed at 2,816 square feet.

In the original proposal, the location of the gym required hotel guests to leave the interior of the building and then reenter the building elsewhere to access the gym. In this submission, the gym has been eliminated from the proposal.

16. Re-evaluate the secondary signage on Clark Street.

 A wall sign remains on the Clark Street elevation for the restaurant.

17. Provide more details on the proposed lighting.

 Attorney Winstanley-O'Connor's memo notes that the lighting will be energy efficient LED low profile lighting. Deflectors and other technology will be utilized, and a photometric study will be prepared prior to installation. The ARB may desire to see that photometric plan as well as lighting specifications to understand the type of fixtures to be used for the proposal and how it may or may not impact abutters.

Attachment:

1. Memo to Jim Doherty dated January 7, 2020.

TOWN OF ARLINGTON
DEPARTMENT OF PLANNING and
COMMUNITY DEVELOPMENT

TOWN HALL, 730 MASSACHUSETTS AVENUE
ARLINGTON, MASSACHUSETTS 02476
TELEPHONE 781-316-3090

MEMORANDUM

To: Jim Doherty, Trustee, 1211 Mass Ave Realty Trust

From: Jennifer Raitt, Director of Planning and Community Development

cc: Mary Winstanley-O'Connor, Esq.

Date: January 7, 2020

Re: Docket #3602, 1207-1211 Massachusetts Avenue supplemental materials and follow-up

Thank you for your submission of materials to my office on January 2, 2020 per my most recent memo and requests. The Department of Planning and Community Development (DPCD) staff reviewed the materials received, dated December 12, 2019, and note that they are an updated plan set that illustrates changes made to the site and the building in the intervening time since the public hearing in the summer 2019 based on feedback from staff and ARB members. This memo documents how the submitted materials respond to items outlined and annotated in two emails sent to you following the initial public hearing on this project on July 22, 2019.

In an email from Erin Zwirko, Assistant Director, to you dated July 24, 2019, the staff enumerated the items that were requested by the Arlington Redevelopment Board (ARB) members during the initial public hearing session:

1. Traffic Study, with a strong focus on Mass Ave, Lowell, Appleton, Forest, and the neighborhood behind the project site and circulation in the area, and completed when school is back in session;

 DPCD has not yet received a traffic study.

2. Parking onsite, and any offsite parking for employees and tour buses;

 The materials provided on January 2, 2020, indicate some adjustments were made to the garage parking and the surface parking to the rear of the building to accommodate moving the dumpster away from Clark Street. In the garage, four spaces were gained by adjusting the size of the parking spaces; however, no dimensions are provided making compliance with the Zoning Bylaw difficult to determine. Five spaces were reduced in surface parking, presumably to provide an adequate size drive aisle for two-way traffic and access to the dumpster, but no dimensions are provided to document compliance with the Zoning Bylaw. Overall, moving the dumpster away from Clark Street is an improvement.

 No additional information has been provided regarding employee parking and tour bus parking. There was reference to the Mill Brook Animal Clinic offering to provide additional off-site parking, but no formal documentation of a shared parking agreement has been provided.

3. Loading and unloading and deliveries, where and how will it happen and determining if vehicles have the ability to turn onto Clark Street and into the project site;

 As noted above in what we have received relative to item 1 (Traffic Study), the surface parking at the rear of the site was adjusted to presumably provide more adequate space for loading and unloading of deliveries.

 The addition of the circular driveway off of Mass Ave will facilitate passenger loading and unloading outside of the public right-of-way limiting conflicts between pedestrians, bicycles, and other vehicles on Mass Ave. This is a better solution that the cut out of the sidewalk originally proposed. Outside of business hours, the circular driveway could be used for deliveries as well.

4. Accounting of the FAR for the building and the bonus;

 DPCD has not received an updated accounting of the FAR for the building and how the bonus provisions of Section 5.3.6 apply to the proposal.

5. Open space calculations;

 DPCD has not received updated open space calculations.

6. Marketing study of similar hotels you've identified, including who operates these hotels, their customers, rack rates, amenities, etc.;

 DPCD has not received a marketing study for similar hotels in the greater Boston area.

7. Take another look at your shadow study, consider the existing shadows and provide a comparison and determine any impact to solar arrays in the neighborhood;

 The plan set includes an updated shadow study based on the new building. The plan set also includes a shadow study documenting the existing conditions of the building and shows trees at the rear of the site. The updated materials do not identify if any of the adjacent buildings have solar arrays installed.

8. Reconsider the LEED Checklist and make some assumptions to bring the credits up;

 DPCD has not received an updated LEED Checklist.

9. ADA accommodations in parking lot and along frontage; and

 One accessible parking space has been designated in the rear surface parking lot. The reference to ADA accommodations along the frontage refers to the original version of the proposal which included a cut out in the sidewalk to provide a wider shoulder for loading and unloading.

10. Better understanding of roof top mechanicals and kitchen venting.

 The rendering shows more roof top mechanical equipment, but no roof plan was submitted or specifications for the roof top mechanical equipment or kitchen venting.

In an email forwarded from Erin Zwirko to you dated July 29, 2019, an ARB member provided comments on the proposal including:

1. Prepare a full transportation plan to understand the impact on the intersection with Appleton/Mass Ave and the adjacent secondary streets. Consider the public recommendation of restricting right turns onto Clark;

 DPCD has not yet received a transportation plan.

2. What are the plans for sidewalk enhancement on Clark around the hotel?

 The plan set illustrates how the at-grade open space on the lot will be improved and activated; however, there is not information regarding sidewalk enhancements on Clark Street.

3. Currently no bike parking is shown at the front of the hotel for restaurant guests. What dayparts is the restaurant open for? Only dinner? Or breakfast and lunch? Think about public need for bike parking for the dining space based on daypart.

 Parking racks are proposed on Mass Ave rather than off of Clark Street in the current plan set. Relocating the bicycle parking to the main frontage is an improvement.

4. What is the plan for deliveries and loading/unloading of buses? Restricted hours?

 DPCD has not received detailed information about deliveries and loading or unloading of buses. The circular driveway and adjustments to the rear surface parking lot might accommodate these functions better, but there is not documentation or dimensions to determine compliance with the Zoning Bylaw.

5. Please detail the hotel valet parking plan proposed to include offsite parking to mitigate the differential between number of hotel rooms, staff, restaurant patrons, and parking spaces.

 DPCD has not received a detailed hotel valet parking plan.

6. Please take another look at the materials proposed for the facade. The stucco and metal panel proposed are not materials that are found in the neighborhood of businesses in the Heights or Arlington Center and are not contextually appropriate nor are they appropriate for the level of Boutique Hotel that has been expressed as the operational/marketing intent. I would suggest that you take another look at the precedents that were cited in the application and come back with a more contextually appropriate facade design. Think about masonry, clapboard, and other more appropriate materials.

 The materials proposed for the façade have been updated to reflect comments made by two members of the ARB who provided detailed feedback. The materials proposed now include brick, masonry, and clapboard panels. However, detailed information regarding the materials is not provided.

7. The quantity and placement of louvers on the main facade of the building are concerning and should be revisited.

 The louvers proposed on the façade have been eliminated.

8. Think about the hierarchy between the Restaurant and Hotel entrances. Currently they are both rendered identically, when they have the opportunity to more individually present themselves.

 The plan set has been revised to make the hotel entrance more prominent than the restaurant entrance.

9. The sliding doors on the front facade of the building on the 4th floor are not appropriate for the context of the neighborhood. If doors are proposed, consider swing doors. Similarly, the horizontal windows on the Clark St elevation are not contextually appropriate.

 Sliding doors are still proposed for the fourth floor hotel units. The Clark Street elevation has been revised.

10. Restaurant planning - You are showing more seating than is achievable and you should accurately identify your potential seat count for the parking study. A good rule of thumb for a restaurant this size is dedicating 1/3 of the space to kitchen/BOH. As an example, currently there is no walk in shown cooler for the restaurant or enough dry storage. This will help mitigate some of the public concern about the number of seats.

 The plan set has been revised to show no seating or space usage in the restaurant space. Without knowing the number of seats proposed for the restaurant, DPCD cannot confirm the parking required per the Zoning Bylaw for the proposal.

11. What are you planning for the deck on the rear of the building? is this seating? For the restaurant or the hotel lounge? Think about noise impact on the neighbors. Think also about whether they should look down onto the parking area. Should screening be incorporated? Wood? Vegetated?

 The rear deck has been eliminated from the proposal.

12. It appears that the only access to the gym is to leave the interior of the building, walk across the parking area and into the gym under the restaurant. This does not seem like an ideal solution for your guests.

 The gym has been eliminated from the proposal.

13. Reconsider the lit secondary signage on Clark St, especially if the parking is expected to be Valet and solely for the hotel staff and guests. If additional signage is proposed, perhaps a vertical banner or blade sign on the front facade to speak to approaching drivers on MA Ave would be more appropriate.

 A wall sign remains on the Clark Street elevation for the restaurant.

14. Come back with more details on the proposed lighting under the overhang on Mass Ave (above outdoor seating) and in the parking garage under the building as this will spill over into the neighborhood.

 DPCD has not received information on the proposed lighting or how it may or may not impact abutters.

Please provide us with a response to the above-noted items that we have not yet received by January 20th.

Should you have any questions regarding this feedback, please contact my office at 781-316-3092 or by email.

Thank you.

Town of Arlington, Massachusetts

Department of Planning & Community Development

730 Massachusetts Avenue, Arlington, Massachusetts 02476

Public Hearing Memorandum

The purpose of this memorandum is to provide the Arlington Redevelopment Board and public with technical information and a planning analysis to assist with the regulatory decision-making process.

To: Arlington Redevelopment Board

From: Jennifer Raitt, Secretary Ex Officio

Subject: Environmental Design Review, 1207-1211 Massachusetts Avenue, Arlington, MA
Docket #3602

Date: July 16, 2019

I. Docket Summary

This is an application by James F. Doherty for 1211 Mass Ave Realty Trust to construct a mixed-use structure at 1207-1211 Massachusetts Avenue within the B2 Neighborhood Business District and the B4 Vehicular Oriented Business District. The Special Permit is to allow the Board to review and approve the proposed project, under Section 3.4, Environmental Design Review.

Following the Town's Request for Proposals (RFP) process in 2016, the applicant has entered into a Purchase & Sale (P&S) Agreement to purchase the property at 1207 Massachusetts Avenue in order to construct the mixed-use building, which is desirable to the Town. 1207 Massachusetts Avenue is the location of the now closed Disabled American Veterans (DAV) club, which ceased operations and has been vacant since mid-2014. The applicant currently owns the immediately adjacent property at 1211 Massachusetts Avenue, and upon successful permitting, will combine the two properties for a unified mixed-use development.

The RFP sought proposals for the purchase and future use of the parcel as a mixed-use development consistent with 2016 amendments to the Arlington Zoning Bylaw, that defined mixed-use as "[a] Combination of two or more distinct land uses, such as commercial, lodging, research, cultural, artistic/creative production, artisanal fabrication,

residential in a single multi-story structure to maximize space usage and promote a vibrant, pedestrian-oriented live-work environment." The applicant proposes a 50-room hotel and restaurant consistent with this definition of mixed-use.

The application also requests a parking reduction under Section 6.1.5 and additional gross floor area under Section 5.3.6.

Materials submitted for consideration of this application:

- Application for EDR Special Permit,
- Narrative,
- Site Plan, Floor Plans, Elevations, and Renderings dated June 20, 2019;
- Planting Schedule;
- Parking and Bicycle Schedule;
- Shadow Study dated June 20, 2019; and,
- Traffic Demand Management Plan.

II. Application of Special Permit Criteria (Arlington Zoning Bylaw, Section 3.3)

1. Section 3.3.3.A.

The use requested is listed as a Special Permit in the use regulations for the applicable district or is so designated elsewhere in this Bylaw.

The applicant proposes a mixed-use structure consisting of a 50-room hotel and restaurant. Mixed-use, which as defined by the Zoning Bylaw includes lodging and commercial uses, requires a Special Permit in both the B2 Neighborhood Business District and the B4 Vehicular Oriented Business District. Mixed-use is additionally subject to Environmental Design Review under Section 3.4.G and due to the proposal's location on Massachusetts Avenue. Mixed-use is described as being allowed in Section 5.5.1 for both the B2 and B4 Districts, in particular in the B4 District when automotive-oriented uses close and are redeveloped. The Board can find that these conditions exist for the proposed project site.

2. Section 3.3.3.B.

The requested use is essential or desirable to the public convenience or welfare.

The redevelopment of the DAV site and the adjacent outdated automotive use is desirable for the public convenience and welfare. The mixed-use structure, which combines a small boutique hotel and restaurant, is well-positioned to take advantage of tourism opportunities along the Battle Road Scenic Byway, the approximate path the British used at the beginning of the American Revolution, in Arlington and neighboring communities. A hotel and restaurant in the immediate area could be desirable to tour groups that want more personalized accommodations. There is an economic benefit that would be gained through the hotel/motel tax (6%) and meals tax (0.75%). Based on current tax revenue generated by the one hotel in Town, this

50-room hotel may generate up to approximately $150,000 of additional tax revenue to the town on an annual basis.[1] The proposed hotel's proximity to Lexington, which welcomes over 100,000 tourists per year, makes it well-positioned to absorb some of the local and regional heritage and business travel, which would provide an economic benefit to the Town of Arlington and local businesses. Neighborhood residents have voiced the critical importance for more restaurants and mixed-use based on feedback gathered from residents as well as a market demand analysis that were part of the development of the Arlington Heights Neighborhood Action Plan.

3. **Section 3.3.3.C.**
The requested use will not create undue traffic congestion or unduly impair pedestrian safety.

The application materials do not provide detailed information regarding the traffic impact of the new use. The ARB must request additional information from the applicant on the following topics before determining that this criterion is satisfied.

The project's only means of ingress and egress is on Clark Street as the existing curb cuts on Massachusetts Avenue will be closed. Due to the new uses, a trip generation analysis is needed to understand the traffic flow and circulation of using Clark Street as the main point of access to the property. For vehicles exiting the property, turning right directs those vehicles into a residential neighborhood and a circuitous route back to Massachusetts Avenue or to Forest Street. The best course of action may be to require vehicles exiting the property to turn left onto Clark Street and then continue either north or south on Massachusetts Avenue, and the ARB will want to consider this as a condition of a decision. By adding more turning traffic to the intersection of Clark Street and Massachusetts Avenue there may be the need to address pedestrian safety at this intersection. On the opposite side of the street is an inbound MBTA Route 77 and 79 bus stop with departures every few minutes, so a cross walk may be necessary at the intersection as the closest cross walk is at Appleton Street. However, without a trip generation analysis, the ARB does not have the full scope of understanding regarding additional traffic as a result of the proposed project.

The nearby intersection of Appleton Street and Massachusetts Avenue is uncontrolled except for when a pedestrian triggers a red light in order to cross the street. A large majority of the pedestrians at this intersection are students walking to or from the Ottoson Middle School. More information is needed from the applicant on how the introduction of a hotel and restaurant could affect the operation of this intersection, especially during the beginning and end of the school day during the school year.

[1] According to the Town of Lexington's most recent Economic Development Report to Town Meeting, the Town of Lexington generates an average of $1.27 million dollars of revenue in hotel/motel taxes.

Additionally, the Transportation Demand Management (TDM) Plan submitted in support of the parking reduction request needs firm commitments regarding the methods in which vehicular use will be reduced at the property. The applicant should also consider providing staff subsidized transit passes and guaranteed rides home. Commitments such as these must be required in any future lease of the building. Finally, the plans show an area to pull off of Massachusetts Avenue which could facilitate valet parking, and could be supported, but this would require approval from the Select Board.

It should be noted that the proposal will improve pedestrian safety along the project site's Massachusetts Avenue frontage. Two large curb cuts will be closed as access to the property will be from Clark Street, where the curb cut will be narrowed.

4. **Section 3.3.3.D.**
The requested use will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested use or any developed use in the immediate area or in any other area of the Town will be unduly subjected to hazards affecting health, safety, or the general welfare.

The mixed-use structure introduces different uses than presently on the project site. There may be different demand on the municipal systems as a result, but will not create hazards affecting health, safety, or the general welfare of the immediate area or in any other area of the Town. While the application materials note that a stormwater system will be installed to control roof and surface stormwater runoff, the ARB will need more information regarding water and sewer usage. The applicant should submit evidence that the public water, drainage, and sewer system are capable of handling the needs of the 50-room hotel and restaurant.

5. **Section 3.3.3.E.**
Any special regulations for the use as may be provided in the Bylaw are fulfilled.

No special regulations are applicable to the proposal. The Board can find that this condition is met.

6. **Section 3.3.3.F.**
The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health or welfare.

The 2016 Annual Town Meeting adopted mixed-use zoning for all business districts with an affirmative vote of 187-35. This stretch of Massachusetts Avenue does not have a distinct aesthetic and there are no predominant architectural styles that characterize this area. The proposed mixed-use structure will not impair the integrity of the district and will provide connections between the Arlington Heights business district and other segments of the Mass Ave commercial corridor. The hotel use in particular will provide greater access for tourists to Arlington's historic

resources that make it part of the Battle Road Scenic Byway, including the nearby Foot of the Rocks monument and the Old Schwamb Mill.

The immediate area around the project site is a mix of residential and commercial spaces. Immediately behind the project site is a neighborhood of mostly single- and two-family homes in an R2 Two-Family District. Higher density residential uses are present across the street on Massachusetts Avenue, but the R2 District carries across Massachusetts Avenue as well where significant elevation is gained. The Heights business district is a short distance away (about 1,500 feet to the west) and an industrial-zoned area is less than 1,000 feet to the east.

7. **Section 3.3.3.G.**
 The requested use will not, by its addition to a neighborhood, cause an excess of the use that could be detrimental to the character of said neighborhood.

 The use will not be in excess or detrimental to the character of the neighborhood. The Board can find that this condition is met.

III. Environmental Design Review Standards (Arlington Zoning Bylaw, Section 3.4)

1. **EDR-1 Preservation of Landscape**
 The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

 The existing site condition is primarily impervious, but the proposal will increase the amount of open space on the site. A 5-foot landscaped buffer is provided along the rear property line that will be planted with tree lilacs, arborvitae, and smaller shrubs such as hydrangea and holly. Planters along Massachusetts Avenue are also proposed. While a planting schedule is provided, a landscape plan must be submitted. The application materials indicate that there will be 1,581 square feet of landscaped open space and 3,384 square feet of usable open space. The landscape plan should also document where the two types of open space will be satisfied on the property.

2. **EDR-2 Relation of the Building to the Environment**
 Proposed development shall be related harmoniously to the terrain and to the use, scale, and architecture of the existing buildings in the vicinity that have functional or visible relationship to the proposed buildings. The Arlington Redevelopment Board may require a modification in massing so as to reduce the effect of shadows on the abutting property in an R0, R1 or R2 district or on public open space.

 At 4 stories and 44 feet tall, the proposed building is taller than most of the buildings in the immediate vicinity. On the opposite side of Massachusetts Avenue, the terrain

quickly gains elevation, so nearby buildings appear much taller due to the elevation change. The proposal also steps in the first floor 8 inches from the second and third floor, and provides the upper-story step back at the top of the third floor at 34 feet. Section 5.3.17 requires that building more than three stories in height, such as the proposal, an additional 7.5-foot step-back (upper story building setback) shall be provided beginning at the third story level or 30 feet above grade, whichever is less. As part of the EDR jurisdiction, these requirements should be further addressed until the Board is satisfied that the building is well-situated on the parcels.

The building does not trigger the height buffer area of Section 5.3.19 because it is proposed at the lower maximum stories and height as identified in the Table of Dimensional and Density Requirements for the Business Districts. However, the application materials also provide a shadow study during each season at the respective Solstice and Equinox.

3. **EDR-3 Open Space**

All open space (landscaped and usable) shall be so designed as to add to the visual amenities of the vicinity by maximizing its visibility for persons passing by the site or overlooking it from nearby properties. The location and configuration of usable open space shall be so designed as to encourage social interaction, maximize its utility and facilitate maintenance.

As noted above, the proposed project will provide open space on the existing primarily impervious site. The application materials indicate that there will be 1,581 square feet of landscaped open space and 3,384 square feet of usable open space. Landscaped buffers will be located at the rear of the property providing some relief to the residential structures located behind the project site. A large patio along Massachusetts Avenue is proposed, which can create gathering space and an inviting atmosphere along the sidewalk. A landscape plan must be submitted and must document where the two types of open space will be satisfied on the property in order to assess compliance with this criterion.

4. **EDR-4 Circulation**

With respect to vehicular and pedestrian and bicycle circulation, including entrances, ramps, walkways, drives, and parking, special attention shall be given to location and number of access points to the public streets (especially in relation to existing traffic controls and mass transit facilities), width of interior drives and access points, general interior circulation, separation of pedestrian and vehicular traffic, access to community facilities, and arrangement of vehicle parking and bicycle parking areas, including bicycle parking spaces required by Section 6.1.12 that are safe and convenient and, insofar as practicable, do not detract from the use and enjoyment of proposed buildings and structures and the neighboring properties.

The application materials indicate that 28 parking spaces will be provided on the site, either under the building or at the rear of the property. The applicant has requested a parking reduction under Section 6.1.5:

Parking Requirement			
		Zoning Requirement	**Total Parking Required**
Hotel	**50 rooms**	**1 space per room**	**50**
Restaurant	**2,568 sf**	**1/300 sf***	**0**
Total Parking			**50**
Section 6.1.5 Reduction			**Up to 25% of the requirement, or 13 spaces**
Total Parking Provided			**28**
* First 3,000 sf of non-residential space in mixed-use projects is exempt.			

In general, as discussed under the response to criterion 3.3.3.C, there is no information about circulation on and around the project site. The only access to the property is from Clark Street and there is no information on how trips to and from the project site will change. A trip generation analysis is needed to understand the traffic flow and circulation of using Clark Street as the main point of access to the property. A trip generation analysis may indicate that right turns from the property onto Clark Street should be restricted and there may be the need for pedestrian improvements at the intersection of Clark Street and Massachusetts Avenue due increased traffic.

On the project site, there is no information on where loading and unloading will occur. Based on the application materials, there is no information on the size of truck that can access the project site and whether vendors need to be limited to a certain size truck in order to navigate Clark Street and the parking lot. Additionally, the floor plan does not seem to provide direct loading access to the restaurant's kitchen or the hotel from the rear parking lot. If loading and unloading will occur on Massachusetts Avenue, it is not clear whether there is shoulder space for a large truck to park during these activities. To combat idling and disruption to the surrounding neighborhood, deliveries should be limited to certain hours of the day.

Circulation within the parking lot is not clearly discussed. Some of the parking spaces provided are tandem spaces and it is not clear how the spaces will be assigned or allocated between the hotel and restaurant. If the parking spaces will be used primarily by the hotel, the ARB needs an understanding of the on-street parking utilization of the area. Additionally, there is no information in the applicant materials regarding the safety and security of the proposed parking area other than 12-foot

light poles. It will be important for the ARB to understand how the spaces will be utilized on the property.

Additionally, the Transportation Demand Management (TDM) Plan submitted in support of the parking reduction request needs firm commitments regarding the methods in which vehicular use will be reduced at the property. The Applicant could also consider providing staff subsidized transit passes and guaranteed rides home. Commitments such as these must be required in any future lease of the building. Finally, the plans show an area to pull off of Massachusetts Avenue which could facilitate valet parking, and could be supported, but this would require approval from the Select Board.

It should be noted that the proposal will improve pedestrian safety along the project site's Massachusetts Avenue frontage. Two large curb cuts will be closed as access to the property will be from Clark Street, where the curb cut will be narrowed.

The application materials indicate that proposal exceeds the requirements of the newly adopted bicycle parking bylaw. For the mixed-use building, 5 short-term bicycle parking spaces are required and 2 long-term bicycle parking spaces are required. The proposal exceeds this requirement by providing 7 short-term spaces and 7 long-term spaces. However, the application materials do not provide any specifications of the proposed racks, and the location of the short-term spaces is inconsistent between the plan set and renderings and the written information. The ARB should request additional information.

5. **EDR-5 Surface Water Drainage**

Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Available Best Management Practices for the site should be employed, and include site planning to minimize impervious surface and reduce clearing and re-grading. Best Management Practices may include erosion control and stormwater treatment by means of swales, filters, plantings, roof gardens, native vegetation, and leaching catch basins. Stormwater should be treated at least minimally on the development site; that which cannot be handled on site shall be removed from all roofs, canopies, paved and pooling areas and carried away in an underground drainage system. Surface water in all paved areas shall be collected in intervals so that it will not obstruct the flow of vehicular or pedestrian traffic and will not create puddles in the paved areas.

In accordance with Section 3.3.4., the Board may require from any applicant, after consultation with the Director of Public Works, security satisfactory to the Board to insure the maintenance of all stormwater facilities such as catch basins, leaching catch basins, detention basins, swales, etc. within the site. The Board may use funds provided by such security to conduct maintenance that the applicant fails to do.

The Board may adjust in its sole discretion the amount and type of financial security such that it is satisfied that the amount is sufficient to provide for any future maintenance needs.

The application materials only indicate that a subsurface infiltration system will be provided under the parking lot to control surface and roof runoff. There are no further details provided in the application materials. The applicant must submit an engineered site plan showing surface water drainage systems and a stormwater management plan that includes an analysis that will inform the size of an underground infiltration system and includes engineering plans for the system. It is also strongly recommended that the applicant include low impact development techniques such as creating a rain garden or other similar feature in the landscape area in the northeast corner of the property.

6. **EDR-6 Utilities Service**

Electric, telephone, cable TV, and other such lines of equipment shall be underground. The proposed method of sanitary sewage disposal and solid waste disposal from all buildings shall be indicated.

The application materials indicate that the new utilities will be underground, but the ARB will want additional information from the applicant on whether any of the existing utilities that serve the site will be reused. It should be noted that there are three utility poles (one of which is a double pole) along the Massachusetts Avenue frontage. Although requests to move or consolidate utility poles are often not accepted by the utility companies, the applicant should attempt to coordinate with the utility company to at least remove the double pole and consolidate the operations to the other two poles as the poles and lines interfere with the structure's visibility. The ARB will want to understand that the services carried on these poles will not be overloaded.

7. **EDR-7 Advertising Features**

The size, location, design, color, texture, lighting and materials of all permanent signs and outdoor advertising structures or features shall not detract from the use and enjoyment of proposed buildings and structures and the surrounding properties.

The signage proposed in the application materials are place holders for the mixed-use structure. However, the proposal appears to be consistent with the newly adopted sign bylaw in terms of location and size. The application materials indicate that the signage will be back lit, but there is no information in the application materials about lighting of the building in general. A condition of a decision by the ARB should include a requirement that the final signage be reviewed for compliance.

8. **EDR-8 Special Features**

Exposed storage areas, exposed machinery installations, service areas, truck loading areas, utility buildings and structures, and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall reasonably be required to prevent their being incongruous with the existing or contemplated environment and the surrounding properties.

There will be equipment on the roof to service the mixed-use structure, and it appears that some of the equipment will be screened. Each hotel room has its own system and the louvers can be seen on the renderings. Although Arlington does not specify a certain noise level at the property line, many nearby communities identify a day-time noise level of no more than 65 dbA or no more than 10 dbA over the background noise level. Overnight, many nearby communities identify a noise level of 50 dbA. Using this as guidance, the applicant should clarify the noise impact of the HVAC and other noise-emitting equipment.

To reduce noise from deliveries or from solid waste removal, the ARB will want information on anti-idling measures and time of day restrictions to ensure that these services do not impact the surrounding residential properties.

The applicant should clarify how the dumpster will be screened and shared.

9. **EDR-9 Safety**

With respect to personal safety, all open and enclosed spaces shall be designed to facilitate building evacuation and maximize accessibility by fire, police and other emergency personnel and equipment. Insofar as practicable, all exterior spaces and interior public and semi-public spaces shall be so designed to minimize the fear and probability of personal harm or injury by increasing the potential surveillance by neighboring residents and passersby of any accident or attempted criminal act.

As noted in the application materials, the proposed interior layout plans have been designed to facilitate building evacuation and accessibility by fire, police, and other emergency personnel and equipment. The application materials indicate that the rear parking lot will be illuminated through the use of 12-foot pole mounted LED lights; however, there is no indication on the plans where these light poles would be located and the specification of such. Further, there is no information on how the open garage will be secured.

10. **EDR-10 Heritage**

With respect to Arlington's heritage, removal or disruption of historic, traditional or significant uses, structures or architectural elements shall be minimized insofar as practical whether these exist on the site or on adjacent properties.

The existing structures are not listed on the *Inventory of Historically or Architecturally Significant Properties in the Town of Arlington* nor are they under the jurisdiction of

the Arlington Historical Commission. As such, the site contains no historic, traditional or significant uses, structures or architectural elements. The Board can find that this condition is met.

Two properties on the opposite side of Massachusetts Avenue (1210 Massachusetts Avenue and 1218-1222 Massachusetts Avenue) are under the jurisdiction of the Historical Commission. The redevelopment of the subject property will not disrupt historic, traditional, or significant uses, structures, or architectural elements that exist on the adjacent properties.

11. EDR-11 Microclimate

With respect to the localized climatic characteristics of a given area, any development which proposes new structures, new hard surface, ground coverage or the installation of machinery which emits heat, vapor or fumes shall endeavor to minimize insofar as practicable, any adverse impacts on light, air and water resources or on noise and temperature levels of the immediate environment.

There are no proposed changes that will impact the microclimate. A shadow study was prepared and is provided in the application materials to illustrate how the building may create additional shadows in the immediate area. Although the project does not trigger the height buffer area, the ARB will want to assess to ensure that the Board is satisfied that the building is well-situated on the parcels.

12. EDR-12 Sustainable Building and Site Design

Projects are encouraged to incorporate best practices related to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Applicants must submit a current Green Building Council Leadership in Energy and Environmental Design (LEED) checklist, appropriate to the type of development, annotated with narrative description that indicates how the LEED performance objectives will be incorporated into the project.

The Applicant indicates that the building will meet the Stretch Code. Additional information regarding the LEED Checklist is needed.

IV. Conditions

General

1. The final design, sign, exterior material, landscaping, and lighting plans shall be subject to the approval of the Arlington Redevelopment Board at the time when future operators are identified. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board

2. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board.

3. The Board maintains continuing jurisdiction over this permit and may, after a duly advertised public hearing, attach other conditions or modify these conditions as it deems appropriate in order to protect the public interest and welfare.

4. Snow removal from all parts of the site, as well as from any abutting public sidewalks, shall be the responsibility of the owner and shall be accomplished in accordance with Town Bylaws.

5. Trash shall be picked up only on Monday through Friday between the hours of 7:00 am and 6:00 pm. All exterior trash and storage areas on the property, if any, shall be properly screened and maintained in accordance with Article 30 of Town Bylaws.

6. The Applicant shall provide a statement from the Town Engineer that all proposed utility services have adequate capacity to serve the development. The applicant shall provide evidence that a final plan for drainage and surface water removal has been reviewed and approved by the Town Engineer.

7. Upon installation of landscaping materials and other site improvements, the Applicant shall remain responsible for such materials and improvement and shall replace and repair as necessary to remain in compliance with the approved site plan.

8. Upon the issuance of the building permit the Applicant shall file with the Inspectional Services Department and the Police Department the names and telephone numbers of contact personnel who may be reached 24 hours each day during the construction period.

TOWN OF ARLINGTON
REDEVELOPMENT BOARD
Application for Special Permit In Accordance with Environmental Design Review Procedures (Section 3.4 of the Zoning Bylaw)

Docket No. _____

1. Property Address 1207 & 1211 Massachusetts Ave
 Name of Record Owner(s) 1211 Mass Ave Realty Trust* Phone 781-640-2942
 Address of Owner 1122 Mass Av, Arlington, MA 02476
 Street City, State, Zip

2. Name of Applicant(s) (if different than above) N/A
 Address _____ Phone _____
 Status Relative to Property (occupant, purchaser, etc.) _____

3. Location of Property Parcels 58-11-1 & 57-4-14
 Assessor's Block Plan, Block, Lot No.

4. Deed recorded in the Registry of deeds, Book 5873, Page 485; 60543 435
 -or- registered in Land Registration Office, Cert. No. _____, in Book _____, Page _____.

5. Present Use of Property (include # of dwelling units, if any) residential, Automotive, vacant social club

6. Proposed Use of Property (include # of dwelling units, if any) mixed-use consisting of a fifty room hotel and restaurant on the first floor.

7. Permit applied for in accordance with the following Zoning Bylaw section(s)

section(s)	title(s)
5.5.3	Mixed use development
5.3.17	Upper story setbacks
6.1.5	Parking reduction in Business district
5.3.6	Exceptions to maximum FAR regulations

8. Please attach a statement that describes your project and provide any additional information that may aid the ARB in understanding the permits you request. Include any reasons that you feel you should be granted the requested permission.

*Town of Arlington

SEE ATTACHED

(In the statement below, strike out the words that do not apply)

The applicant states that 1211 Mass Ave Realty Trust is the ~~owner~~ -or- occupant -or- ~~purchaser under agreement~~ of the property in Arlington located at 1211 & 1207 Massachusetts Ave. which is the subject of this application; and that unfavorable action -or- no unfavorable action has been taken by the Zoning Board of Appeals on a similar application regarding this property within the last two years. The applicant expressly agrees to comply with any and all conditions and qualifications imposed upon this permission, either by the Zoning Bylaw or by the Redevelopment Board, should the permit be granted.

Trustee

Signature of Applicant(s)

1622 Massachusetts Ave Arlington, MA. 781-640-2942

Address Phone

Town of Arlington Redevelopment Board
Application for Special Permit in accordance with
Environmental Design Review (Section 3.4)

Required Submittals Checklist

Two full sets of materials and one electronic copy are required. A model may be requested. Review the ARB's Rules and Regulations, which can be found at arlingtonma.gov/arb, for the full list of required submittals.

- ✓ Dimensional and Parking Information Form (see attached)
- ✓ Site plan of proposal
- ____ Model, if required
- ✓ Drawing of existing conditions – photo
- ✓ Drawing of proposed structure
- ✓ Proposed landscaping. May be incorporated into site plan
- ✓ Photographs
- ✓ Impact statement
- ✓ Application and plans for sign permits
- ____ Stormwater management plan (for stormwater management during construction for projects with new construction –

FOR OFFICE USE ONLY

_____	Special Permit Granted	Date: _____
_____	Received evidence of filing with Registry of Deeds	Date: _____
EL	Notified Building Inspector of Special Permit filing	Date: 6/24/19

TOWN OF ARLINGTON
Dimensional and Parking Information
for Application to
The Arlington Redevelopment Board

Docket No. _____

Property Location 1207+1211 MASSACHUSETTS AVE Zoning District B4/B2

Owner: 1211 MASS AVE REALTY TRUST Address: 1211 MASSACHUSETTS AV

Present Use/Occupancy: No. of Dwelling Units:
Mixed use/residential, automotive, social club

Uses and their gross square feet:
5,731 SF

Proposed Use/Occupancy: No. of Dwelling Units:
Mixed use/Hotel, Restaurant

Uses and their gross square feet:
24,443 SF

	Present Conditions	Proposed Conditions	Min. or Max. Required by Zoning for Proposed Use
Lot Size	14,030	14,030	min.
Frontage	160.12	160.12*	min. 50
Floor Area Ratio	.41	1.67	max. 1.8
Lot Coverage (%), where applicable	—	—	max. N/A
Lot Area per Dwelling Unit (square feet)	—	—	min. —
Front Yard Depth (feet)	10	4.7	min. —
Side Yard Width (feet) right side	—	—	min. —
left side	—	—	min. —
Rear Yard Depth (feet)	16	38	min. 18
Height			min. —
Stories	2	4	stories 4-5
Feet	25	44	feet 50'
Open Space (% of G.F.A.)			min. —
Landscaped (square feet)	1170	1581	(s.f.)
Usable (square feet)	1670	3384	(s.f.)
Parking Spaces (No.)	24	28	min. 50
Parking Area Setbacks (feet), where applicable	0	5'	min. 5'
Loading Spaces (No.)	0	0	min. —
Type of Construction	TYPE 2B #5		
Distance to Nearest Building	0	.06	min. 0

*MASSACHUSETTS AVENUE frontage only

PLANNING & COMMUNITY
DEVELOPMENT
2019 JUN 21 A 11: 15

Hand Delivered

June 20, 2019

Redevelopment Board

Town of Arlington

730 Massachusetts Avenue

Arlington, Ma. 02476

RE: Special Permit Application – 1207 & 1211 Massachusetts Avenue

Dear Members:

Enclosed please find our application for Special Permit in accordance with Environmental Design Review Procedures (Section 3.4 of the Arlington Zoning Bylaw). Included in this application are the submittals outlined on the check list. We have spent many hours developing these plans with input from the Planning department staff, which we are very appreciative of. These discussions have been very helpful and we look forward to discussing this proposal with you.

The proposed development would demolish the current improvements on both parcels and construct a four story mixed use development. When complete, the property will consist of a 50 room boutique hotel and upscale restaurant. This proposal will provide much needed improvements to the area and a significant economic stimulus to the Heights. Below we address the narrative relating to the Impact Statement and Special Permit Criteria.

Impact Statement:

1. ***Preservation of Landscaping.***

The current site has a small amount of landscaping in front of the former DAV Post. The balance of the site is covered by the buildings, pavement, and walkways on the site. We intend to provide a larger area with a substantial addition of trees, plants, and landscaping along the rear of the site, providing a nice lush buffer to the residential district to the rear. In addition we have an extensive planting and open space design for the front of the site along Massachusetts Avenue. Please see the attached site plan and planting schedule.

2. ***Relation of Buildings to Environment.***

As mentioned above, this proposal involves a four story elevator building consisting of a hotel and restaurant. The hotel lobby and restaurant will be located on the first floor while all guest rooms will be on the upper levels. The fourth floor will also include private deck space for each unit on that level, as well as a grassed area for other hotel guests. The proposal will move the structure closer to Massachusetts Avenue and much further away for the residential neighborhood to the rear. This project is in harmony with the retail and other uses in the area.

3. Open Space.

The site is currently improved with two structures having a combined footprint of 4,614 sq. ft. The proposed structure will have a footprint of 5,516 sq. ft., an increase of 902 sq. ft. Although there is a slight increase, the usable open space, substantial pervious area reduction and rear yard setbacks are all positive results of this project.

4. Circulation.

The improvements proposed will help the circulation for vehicular, bicycle, and pedestrians. We will be eliminating two large driveway openings (totaling 55') and realigning the sidewalk and curbing. In addition we are providing indoor and outdoor areas for bicycles. All parking will be provided via a single curb cut in the rear. Bus service to multiple locations can be boarded / dropped off within feet of the property and is convenient to highway access and the bike path.

5. Surface Water Drainage.

The properties are currently covered (over 90%) by impervious surfaces. The proposal will result in a reduction in impervious surface, therefore Title 5, article 15, section 4 does not apply. However, we have met with the Assistant Town Engineer and have agreed to construct a storm water management system onsite. The system will be located under the driveway and contain all roof and surface runoff. All surface water will be contained on site, in compliance to the bylaws and with Town approval.

6. Utility Service.

As part of the redevelopment, all new utility services will be installed to the property. These systems will all be underground and conform to Town requirements.

7. Advertising Features.

As shown on the renderings, we are proposing signage for the hotel and restaurant. It will appear on the front and West side. In Addition there will be some small signs (most likely two or three) in the rear to guide vehicular, bicycle and pedestrian traffic. On the front the signage will be a contemporary font (12") and mounted to the front of the canopy to the hotel and restaurant. The signage on Clark Street will be on the building façade, the fonts (Hotel sign 12", restaurant 8") will match the canopy signage. Both the front canopy and the Clark Street signage will be back lit.

8. Special Features.

We have proposed substantial landscaping on site, specifically the rear boundary. This is intended to provide adequate screening and create a more harmonious environment than currently exist.

9. Safety.

We believe the proposed improvements to the sidewalks and the elimination of two driveway openings will create safer off site conditions for residents. In addition, the building has two stairwells servicing all floors as well as an elevator. It will meet all ADA and fire code requirements. Illumination of the rear parking area will be achieved by 12'-0" high pole mounted LED lights with cut off lenses to ensure no other properties are affected. Additional LED down lights will be mounted below the projecting balcony to illuminate the area at the building covered parking entrance.

10. Heritage.

This project does not involve any historical structures, nor will it disrupt any historical uses. In fact we believe that this project will increase interest in the Towns many Historic sites. Located a short distance from the property is the "FOOT OF THE HILLS" site and "OLD SCHWAMB MILL." It is our goal to leverage the Lexington tour groups, and introduce them to the Town where the first shot of the Revolution was fired!

11. Microclimate.

We believe the increase in permeable surface will impact light, air, and water recharge in a positive way. In addition this will also create a nice natural buffer. The new structure will be 35 to 54 feet away from the rear boundary, which is a significant increase from the current conditions which ranges from 16 to 20 feet.

The basement level has a sizable mechanical equipment room serving the main street level public spaces (the Hotel Lobby and the Restaurant). All of the upper floor hotel rooms are served by individual vertical air handlers (V-TAC) units, as depicted by the louvers on the building elevations and renderings. All of the equipment is designed and located to control any emissions. The entire building will be exhausted through the high roof with low profile exhaust fans.

12. *Sustainable Building and Site Design.*

This building will meet or exceed the Towns New Stretch Code. Below we have provided some details of the exterior finishes being proposed.

Main Level: Kawneer Curtain wall system, making the public spaces as transparent (inviting) as possible;

2ND & 3RD Floor: The cantilevered (projected) bays consist of an insulated stucco system, the recess portions consist of either actual 1"x finished wood or a "Nicha" cladding having the appearance of wood.

4TH Floor: Is clad with the insulated stucco system.

Both the high and low roofs are copped with a darker metal roof edge system.

Clark Street Façade:

Main Level: (see above for the public spaces); The stair well is clad with a metal panel system similar to Corten or equal.

2ND & 3RD Floor: Consists of either actual 1"x finished wood or a "Nicha" cladding having the appearance of wood. The stair well is clad with a metal panel system similar to Corten or equal.

4TH Floor: Is clad with the insulated stucco system. The stair well is clad with a metal panel system similar to Corten or equal.

Both the high and low roofs are copped with a darker metal roof edge system.

All windows occurring in the stair well are clad with a metal louver system.

Rear Façade:

Lower Level: The main field is clad with either actual 1"x finished wood or a "Nicha" cladding having the appearance of wood. Both ends of the building are clad with a metal panel system similar to Corten or equal.

Main Level: The main field is clad with either actual 1"x finished wood or a "Nicha" cladding having the appearance of wood. Both ends of the building are clad with a metal panel system similar to Corten or equal.

2ND & 3RD Floor: The cantilevered (projected) bays consist of an insulated stucco system, the recess portions consist of either actual 1"x finished wood or a "Nicha" cladding having the appearance of wood.

4TH Floor: Is clad with the insulated stucco system. The stair well is clad with a metal panel system similar to Corten or equal. Both ends of the building are clad with a metal panel system similar to Corten or equal.

Both the high and low roofs are copped with a darker metal roof edge system.

Right Side Façade:

A portion of the lower level is a common wall. The remainder of the exterior cover will be similar to the design of the rear façade.

Special Permit Criteria

- This mixed use project is proposed in the B4/B2 zoning districts. Mixed use is an allowable use, provided a Special Permit is issued by the Board. This proposal was submitted as a response to an RFP issued by the Town of Arlington for a mixed use development at 1207 Massachusetts Avenue. We seek approval of a special permit from the "Use Regulations For Business Districts" section 5.5.3.
- The proposal calls for a four story building containing a hotel and restaurant. The pertinent section of the bylaw, Section 5.3.17, provides for any building over three stories in height to have a "step in" of 7.5' at the third floor level or 30'.

The proposed design "steps in" the first floor 8" from the beginning of the second and third floors and again at the top of the third floor. The result of this design has the main façade comprised of only two floors (where as the bylaw allows for three), with a "step in" at 34' rather than 30'.

We believe that this design not only meets the intent of the bylaw, but provides even greater reduction in massing. We therefore request the Board provide relief.

- The proposal increases the amount of parking on the site partially by providing 20 spaces under the building in addition to 8 outside spaces. The bylaw calls for 50 spaces and therefore we are seeking relief in accordance with section 6.1.5 of the bylaw (Please see attached parking summary grid).

The proposal provides substantial indoor and outdoor parking for bicycles on a long term and short term basis. Both areas are easily accessible and not only provide for bicycle storage, but there will be a bench and some tools available. In addition we are providing maps of the local bike network and other information for bicyclists (please see attached bicycle storage summary).

As required in the bylaw we have also included a Traffic Reduction Plan which provides many more details on our plan to comply with the bylaw. Below I have outlined a few additional commitments we are proposing;

Charge for parking off site;

Provide preferential parking for carpool vehicles;

Provide transit pass subsidies;

Provide covered bicycle parking and storage.

- The proposal is located in the zoning districts of B4 & B2, which has an FAR of 1.2. According to section 5.3.6 "Increase in Maximum Floor Area Ratio" the Board may provide relief for mixed use building area in these districts.

As noted, we are substantially increasing the permeable and open space on the site. This will provide for a much larger buffer to the residential district to the rear. The design of the building and landscaping plan will also provide landscaping and open space along the entire Massachusetts Avenue frontage. A portion of this area also will provide a nice open area for local community performances and art shows or presentations regarding the local historical locations nearby. We will also be dedicating an area in the lobby of the hotel to a local Veteran and community person.

Our request for an increase of 2,398 sf of building area, equates to an 11% increase. We believe we meet the criteria for relief.

1. The proposed development will transform a blighted area and provide a missing dinning option in the Heights as well as a Hotel for visitors and relatives of residents. Town Meeting has changed the zoning to encourage mixed use development for the convenience and welfare of the public.
2. The property currently has three very large curb cuts on Massachusetts Avenue and Clark Street. As part of this proposal we will be removing the two on Massachusetts Avenue and shortening the Clark Street opening. We believe this and other adjustments to the sidewalk in front will improve both pedestrian safety and traffic congestion.
3. This project will not overload any public water, drainage or sewer system. We are proposing to reduce the impervious surface and install a storm water management system on site. There currently are none.

4. The current improvements consist of automotive repair and sales, as well as a former social club. The proposed development will complement the new leader bank and hopefully stimulate of retail activity in the property at 1215 Massachusetts Avenue. This proposal will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health, morals or welfare. Our goal is to work with the Redevelopment Board and staff to ensure that any special regulations for this use, as provided in the Bylaw, are fulfilled.

5. The only other hotel in Arlington is on the Cambridge line. Not only will this proposed use not cause an excess of this use, we believe this will provide economic stimulus to the retail district in the Heights, draw visitors from Lexington to the historic sites of Arlington and provide an upscale dinning and gathering area for the neighborhood.

We believe this application is in the spirit of what Town Meeting envisioned when it adopted the mixed use section to the Zoning Bylaw. The RFP waived all permitting fees associated with this development, therefore no application fee was included. We look forward to meeting with the Redevelopment Board. As a result of this process, we request the Board approve our Petition for Environmental Design Review and Special Permits requested.

Respectfully,

James F. Doherty

Trustee

1211 Massachusetts Avenue

Traffic Demand Management Plan (TDM)

This property is located in one of the most ideal locations to support a parking reduction request. The site is located within 50 yards of an East / West bound MBTA surface bus stop. In addition there is a central terminal and other bus lines within walking distance.

The site is in close proximity to the Minuteman Bike Path (approximately 600 yards) which can be accessed by a street directly adjacent to the property. In addition there are marked bike lanes on Massachusetts Avenue. Both of these options provide a practical and safe route for guests. To encourage this use we will be providing an outdoor and indoor location for bicycle storage.

To help promote ridesharing we will be working with local taxi operators, livery services, and shuttles which connect areas like Alewife to employment hubs on Route 128. We also are in discussions with ZIPCAR for a spot at the site.

Finally we are discussing other nearby locations to obtain Valet parking, if necessary. It is our belief that this plan addresses the Bylaw and as mentioned previously, is a deserving location to warrant the requested relief.

Parking Summary			
1211 Massachusetts Ave			
Spaces Required:			
Use	**Quanity**	**# of spaces**	**Total Required**
Hotel	50	50	50
Resturant	2,568 sf	0	0
Total			50
Proposed			28
Reduction			22

Bicycle Storage Summary			
1211 Massachusetts Ave			
Spaces Required:			
Use	**Short Term**	**Long Term**	**Total Required**
Hotel	3	1	4
Resturant	2	1	3
Total	**5**	**2**	**7**
Proposed	**7**	**7**	**14**

Planting Schedule				
1211 Massachusetts Ave				
Quantity	**Botonical Name**	**Common Name**	**Notes**	**Location**
75	Buxus Green Velvet	Green Velvet Boxwood	15-18"	Front
75	Carex Blue Zinger	Blue Zinger Grass	n/a	Front
4	Syringa Reticulata Ivory Silk	Tree Liliac	2"	Rear
10	Thujastandishi x Pucata	Green Grant Arborvitae	6-8'	Rear
4	Ilex x Meserveae	Blue Princess	8-10"	Rear
4	Hydrangea Quercifolia	Oakleaf Hydrangea	4'	side

SPECIAL PERMIT - SITE PLAN REVIEW

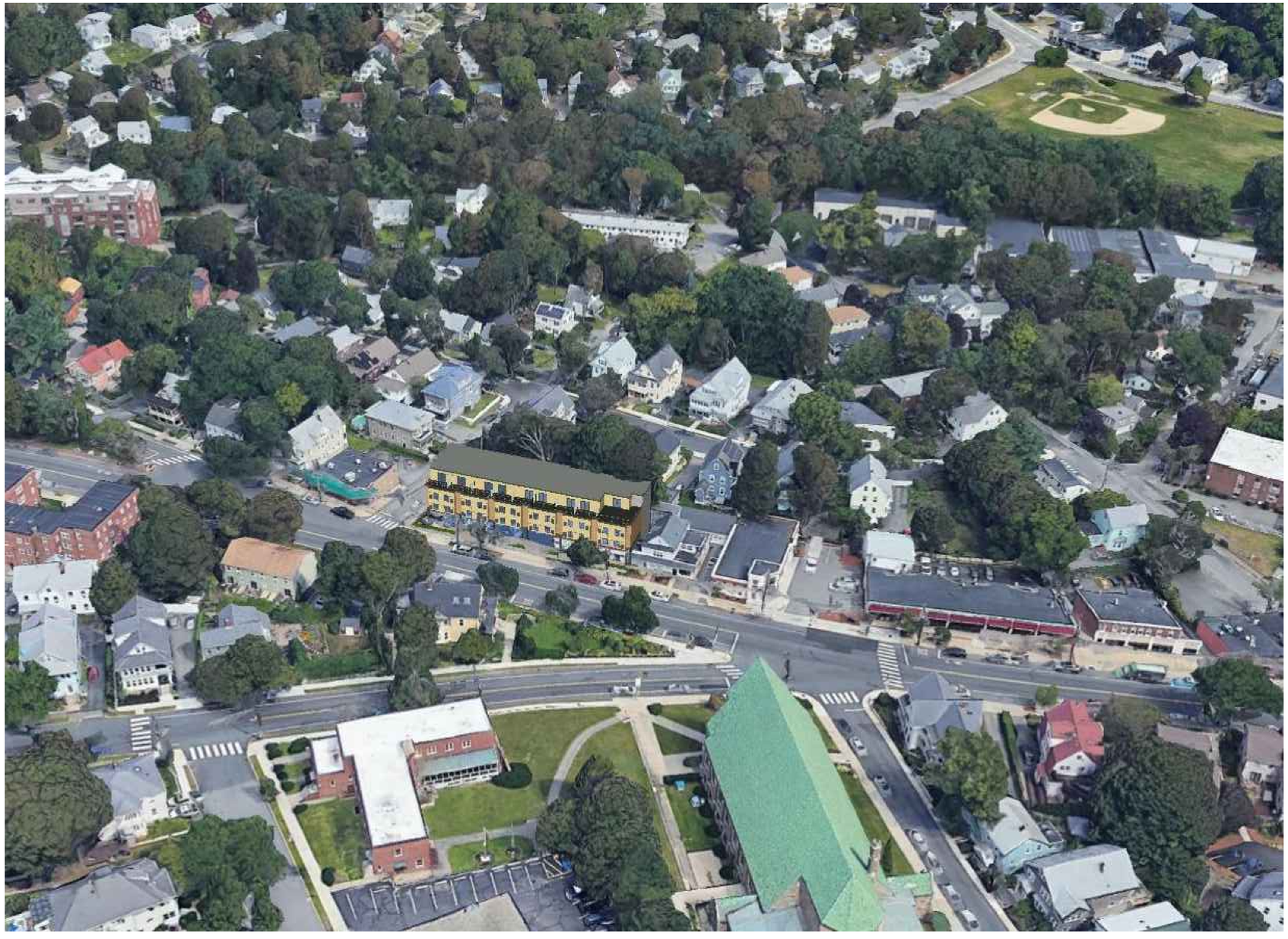
1211 Massachusetts Avenue
Arlington, MA 02476

June 20, 2019

LINCOLN
Architects LLC

LINCON ARCHITECTS LLC
1 Mount Vernon Street, Suite 203
Winchester, MA 01890
781.721.7721

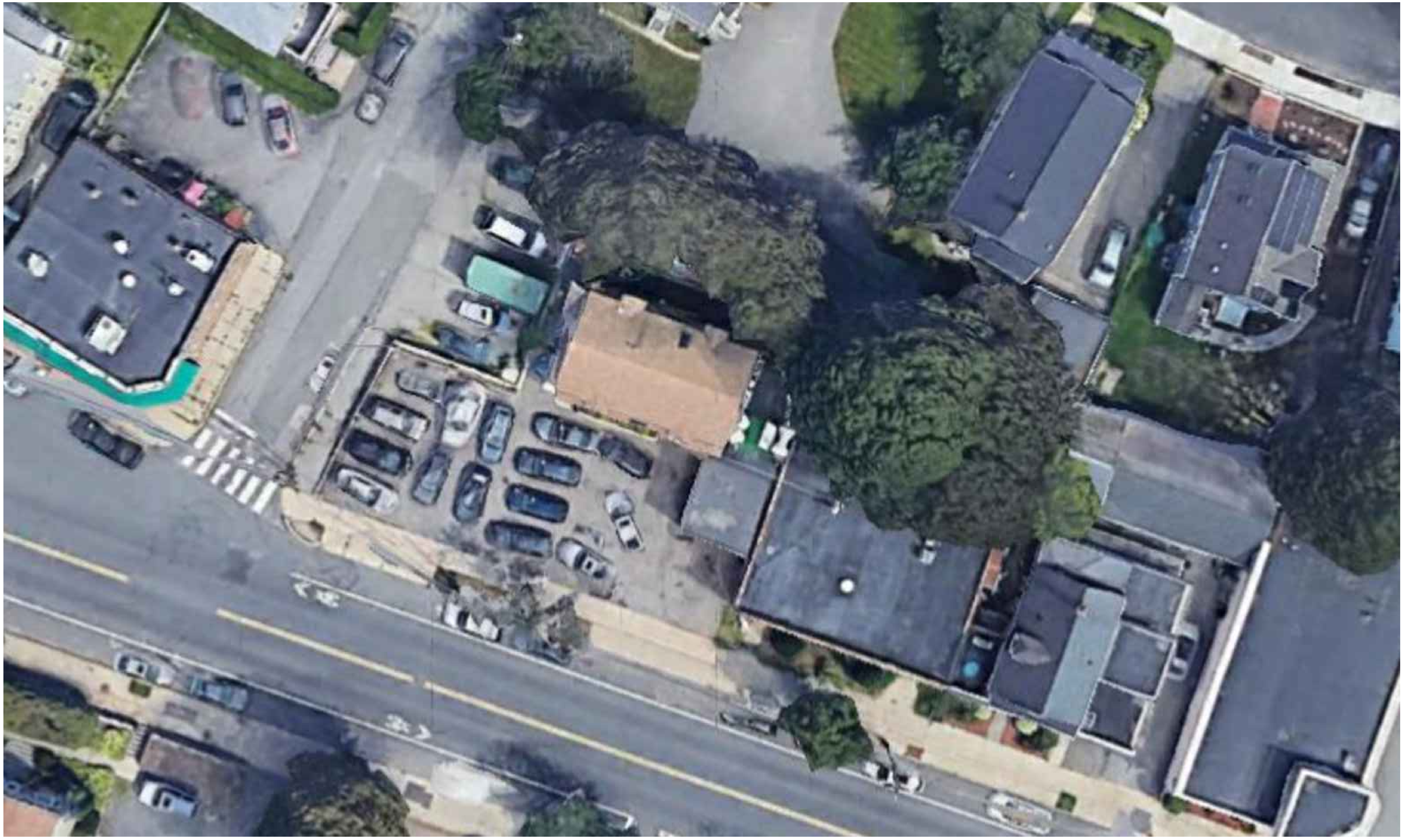
LOCUS PLAN



DRAWING LIST

ARCHITECTURAL

COVER SHEET/LOCUS PLAN/ZONNING SUMMARY
EXISTING CONDITION DIAGRAM
PROPOSED PLOT PLAN
SITE PLAN/LANDSCAPING PLAN
LOWER LEVEL FLOOR PLAN
MAIN LEVEL FLOOR PLAN
SECOND & THIRD FLOOR PLAN
FOURTH FLOOR PLAN
BUILDING ELEVATIONS
RENDERINGS/VIEW FROM MASSACHUSETTS AVENUE
RENDERINGS/VIEW FROM CLARK STREET
RENDERINGS/BIRDS EYE VIEW FROM MASSACHUSETTS AVENUE
SHADOW STYDY/SUMMER SOLSTICE
SHADOW STYDY/WINTER SOLSTICE
SHADOW STYDY/AUTUMN EQUINOX
SHADOW STYDY/SPRING EQUINOX



PROPOSED HOTEL COMPLEX

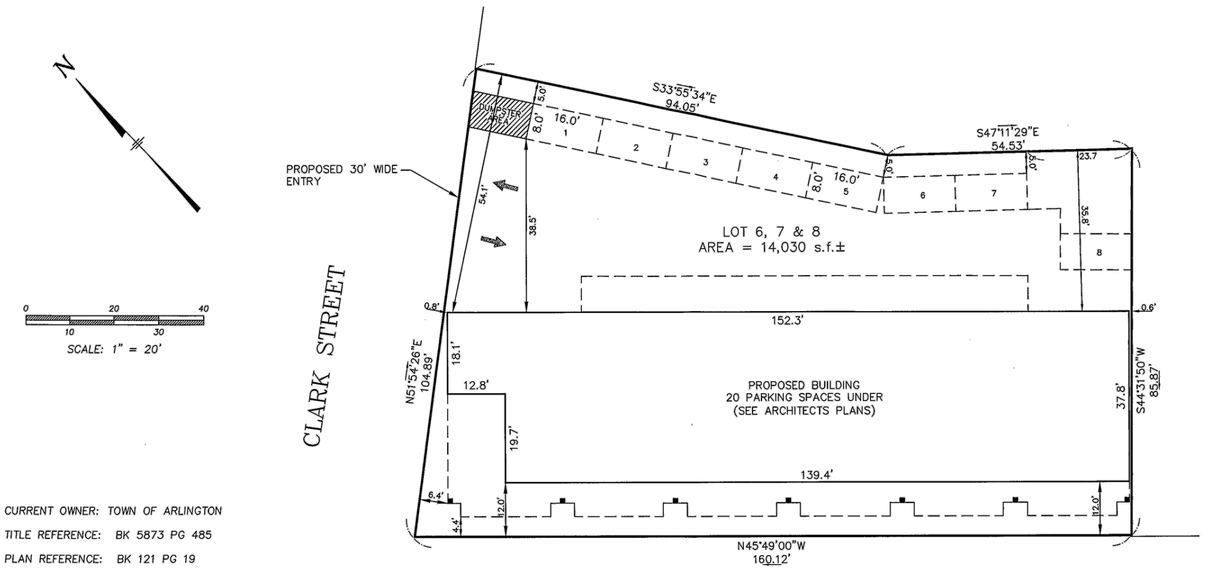
1211 Massachusetts Avenue, Arlington MA

June 20, 2019

Existing Conditions Diagram

0 8' 16' 32' N

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Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890



CURRENT OWNER: TOWN OF ARLINGTON

TITLE REFERENCE: BK 5873 PG 485

PLAN REFERENCE: BK 121 PG 19

THIS PLAN WAS PREPARED WITHOUT A FULL TITLE EXAMINATION AND IS NOT A CERTIFICATION TO THE TITLE OF THE LANDS SHOWN. THE OWNERSHIP OF ABUTTING PROPERTIES IS ACCORDING TO ASSESSORS RECORDS. THIS PLAN MAY OR MAY NOT SHOW ALL ENCUMBRANCES WHETHER EXPRESSED, IMPLIED OR PRESCRIPTIVE.

SURVEYOR'S CERTIFICATION:

TO: JIM DOHERTY

I CERTIFY THAT THIS PLAN AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE GENERALLY ACCEPTABLE PRACTICES OF LAND SURVEYORS IN THE COMMONWEALTH OF MASSACHUSETTS FOR A PLAN AND SURVEY OF THIS TYPE. THIS CERTIFICATION IS MADE ONLY TO THE ABOVE NAMED INDIVIDUAL(S) AND IS NULL AND VOID UPON ANY FURTHER CONVEYANCE OF THIS PLAN.

THE FIELD WORK WAS COMPLETED ON: NOVEMBER 19, 2018
DATE OF PLAN: NOVEMBER 24, 2018
DATE OF PLAN: FEBRUARY 14, 2019
REVISION: JUNE 19, 2019 (PROPOSED)

06/19/2019
RICHARD J. MEDE, JR. P.L.S. DATE:

COMMONWEALTH OF MASSACHUSETTS
Richard J Mede Jr
NO. 36864
REGISTERED
PROFESSIONAL LAND SURVEYOR

PROPOSED PLOT PLAN
1207 MASS AVENUE
ARLINGTON, MA.
(MIDDLESEX COUNTY)

PREPARED BY:

MEDFORD ENGINEERING & SURVEY
ANGELO B. VENEZIANO ASSOCIATES
15 HALL STREET, MEDFORD, MA 02155
781-396-4466 fax: 781-396-8052

PREPARED FOR: JIM DOHERTY

DRAWN	CHECKED	FILE No.
CAV	RJM	20375

Planting Schedule
1211 Massachusetts Ave

75	Buxus Green Velvet	Green Velvet Boxwood	15-18"	Front
75	Carex Blue Zinger	Blue Zinger Grass	n/a	Front
4	Syringa Reticulata Ivory Silk	Tree Liliac	2"	Rear
10	Thujastandishi x Pucata	Green Grant Arborvitae	6-8'	Rear
5	Ilex x Meserveae	Blue Princess	8-10"	Rear
4	Hydrangea Quercifolia	Oakleaf Hydrangea	4'	side



PROPOSED HOTEL COMPLEX

1211 Massachusetts Avenue, Arlington MA

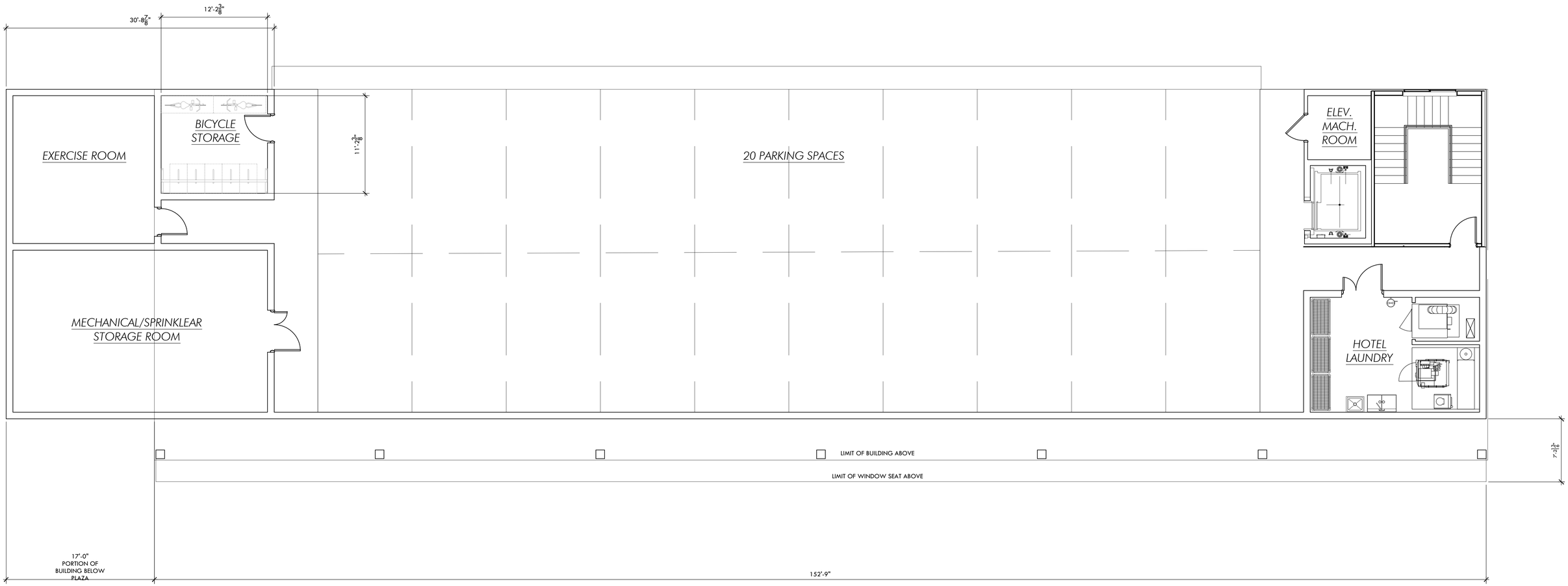
June 20, 2019

Site Plan

0 8' 16' 32'

N

LINCOLN Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890



PROPOSED HOTEL COMPLEX

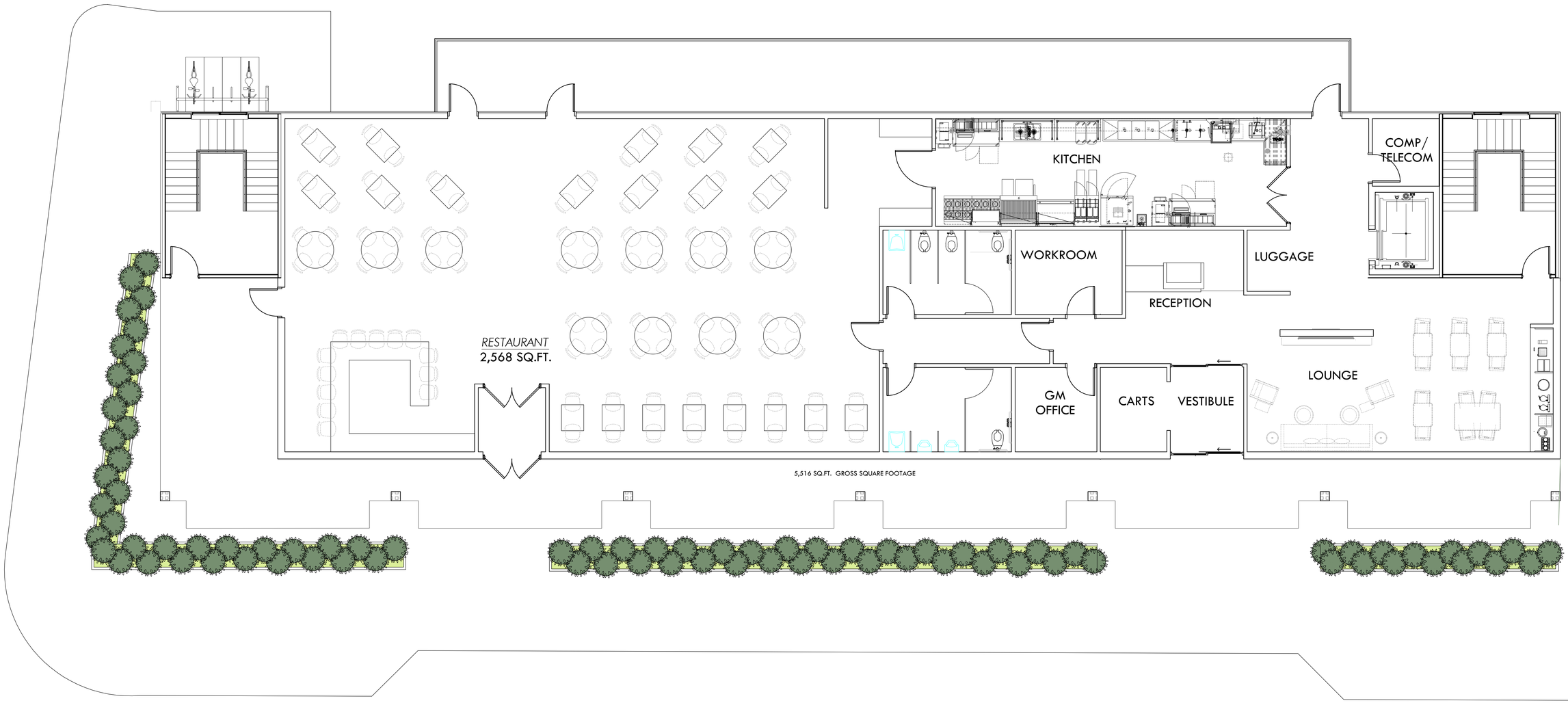
1211 Massachusetts Avenue, Arlington MA

June 20, 2019

Lower Level Plan

0 8' 16' 32'

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Winchester Massachusetts 01890



PROPOSED HOTEL COMPLEX

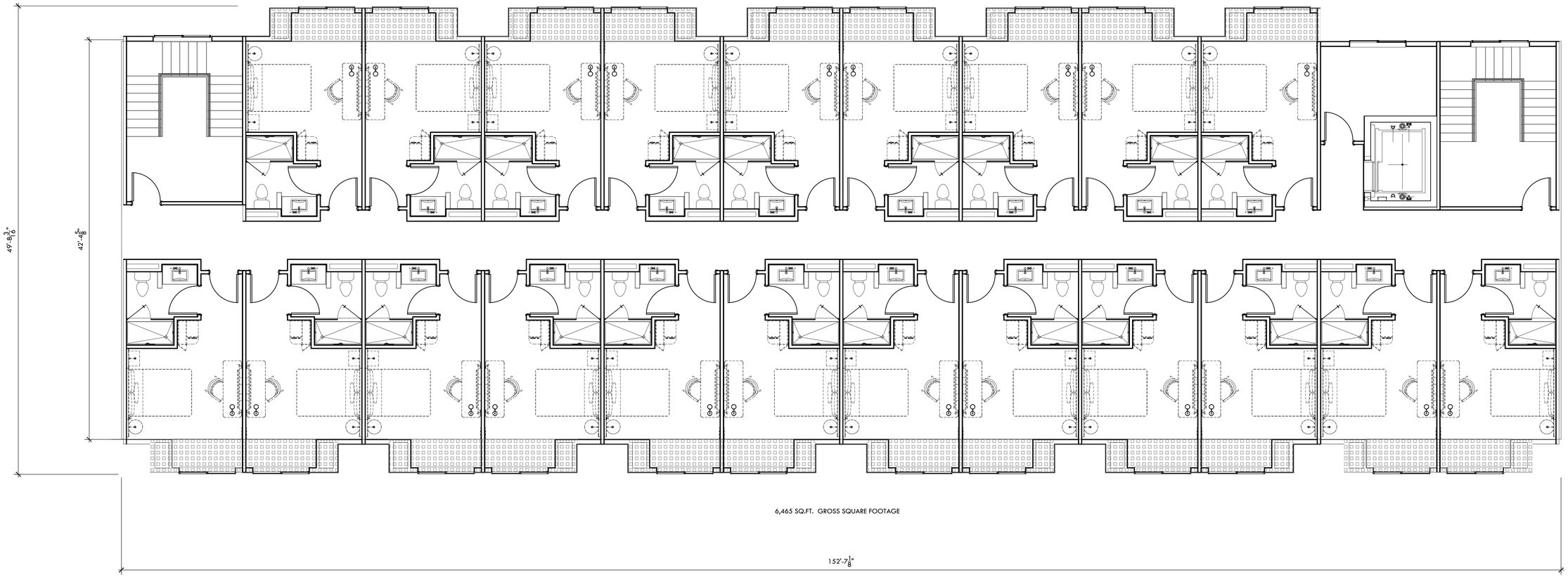
1211 Massachusetts Avenue, Arlington MA

June 20, 2019

First Floor Plan

0 8' 16' 32'

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Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890



PROPOSED HOTEL COMPLEX

1211 Massachusetts Avenue, Arlington MA

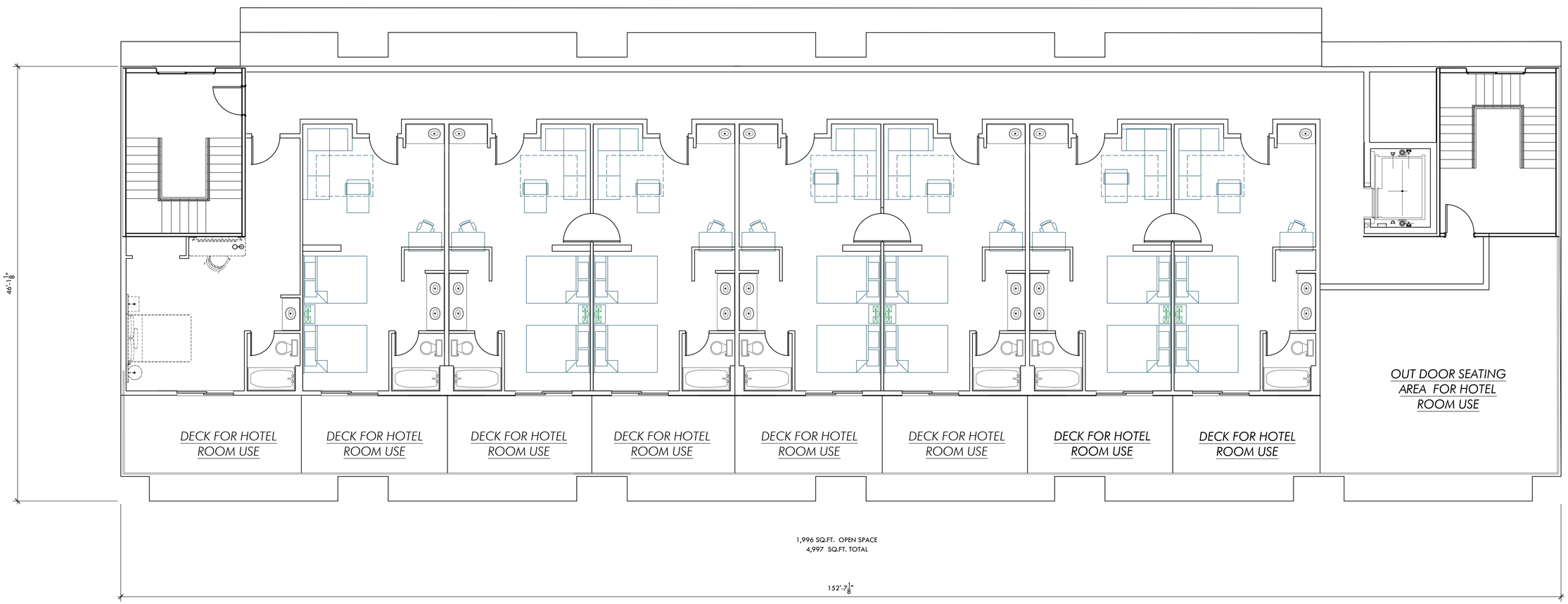
June 20, 2019

Second & Third Floor Plan

0 8' 16' 32'

N

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Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890



PROPOSED HOTEL COMPLEX

1211 Massachusetts Avenue, Arlington MA

June 20, 2019

Fourth Floor Plan

0 8' 16' 32'

LINCOLN Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890



Front Elevation (Massachusetts Avenue)



Side Elevation (Clark Street)



Rear Elevation

Building Elevations

PROPOSED HOTEL COMPLEX

1211 Massachusetts Avenue, Arlington MA

June 20, 2019

0 8' 16' 32' N

LINCOLN Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890



View From Massachusetts Avenue

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue, Arlington MA
June 20, 2019

Renderings

0 8' 16' 32' N

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Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890



View From Clark Street

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue, Arlington MA
June 20, 2019

Renderings

0 8 16 32' N

LINCOLN
Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890



Birds Eye View From Massachusetts Avenue

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Winchester Massachusetts 01890

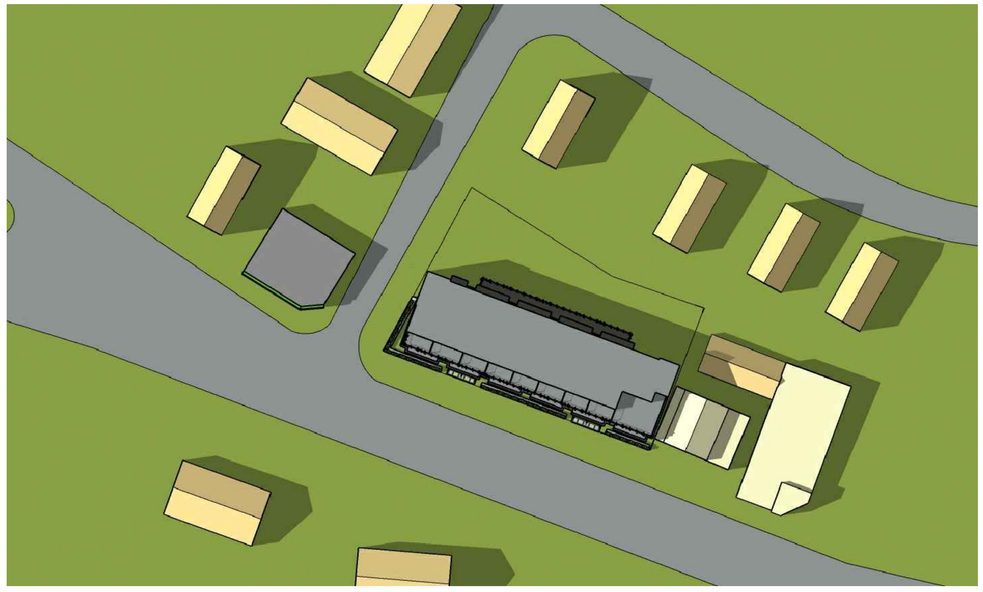
Summer Solstice



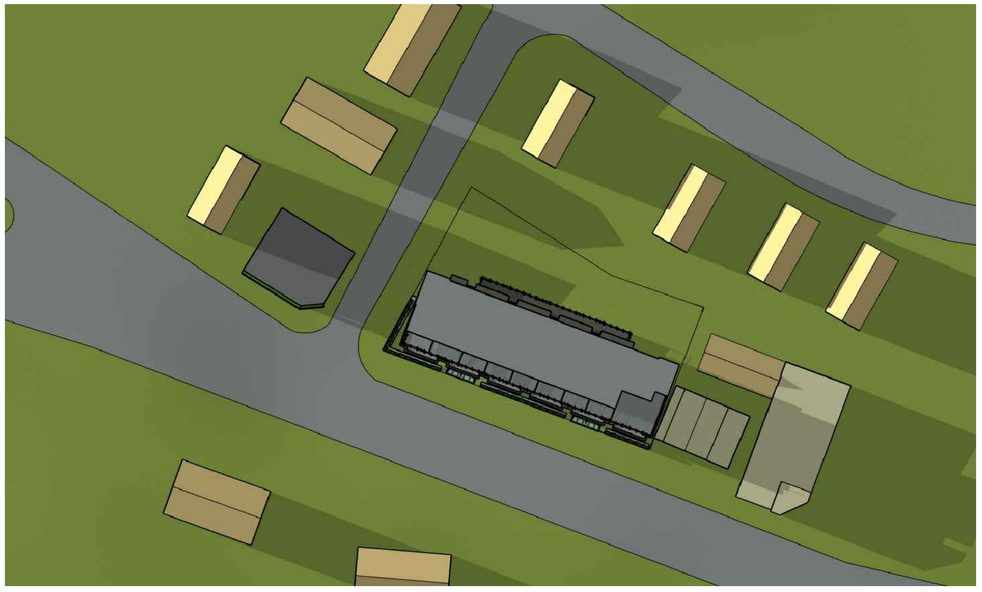
9:00 AM



12:00 PM



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PROPOSED HOTEL COMPLEX

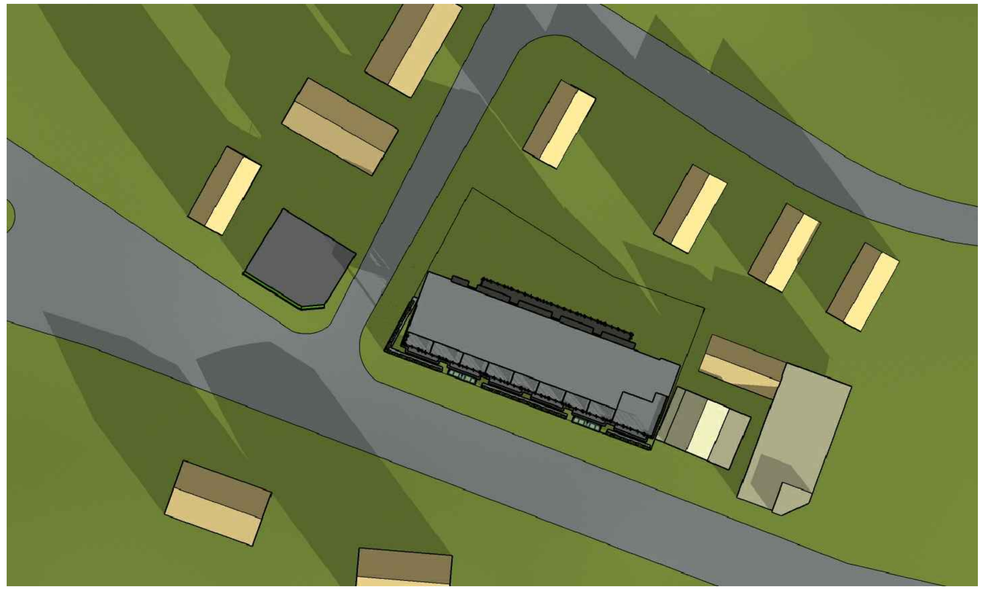
1211 Massachusetts Avenue, Arlington MA

June 20, 2019

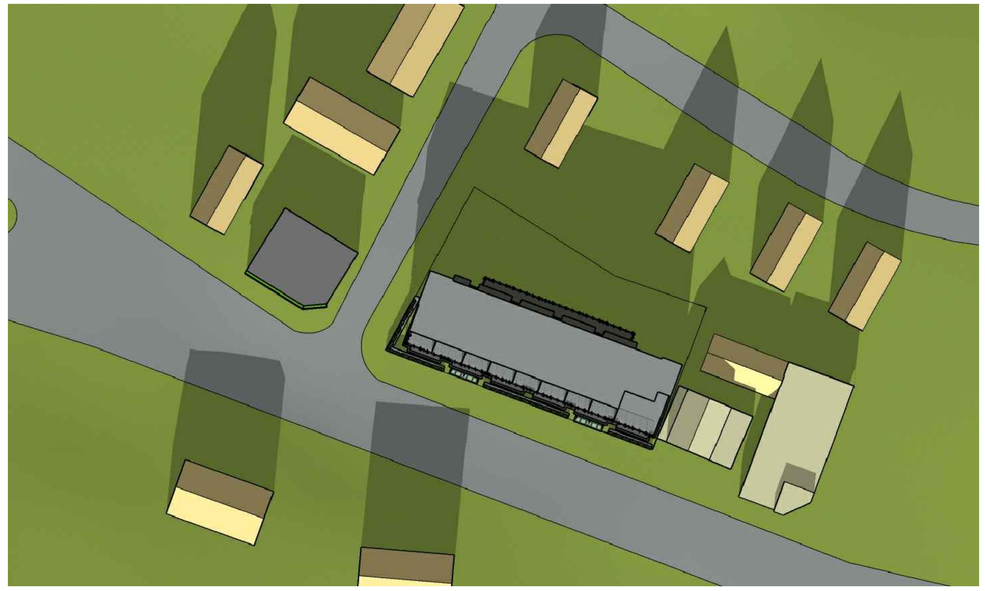
Shadow Study

LINCOLN Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890

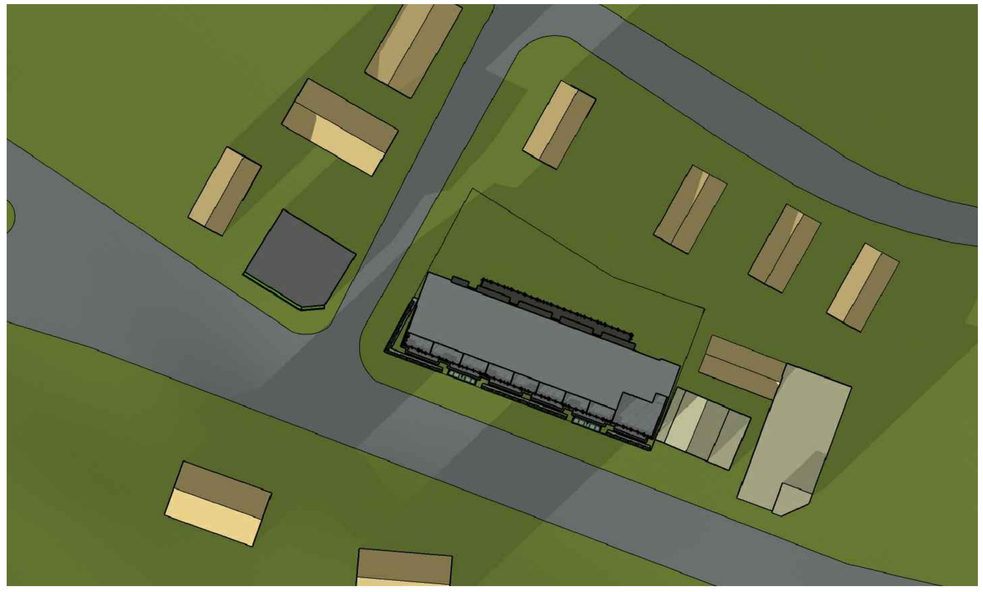
Winter Solstice



9:00 AM



12:00 PM



3:00 PM



6:00 PM

Shadow Study

PROPOSED HOTEL COMPLEX

1211 Massachusetts Avenue, Arlington MA

June 20, 2019

LINCOLN Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890

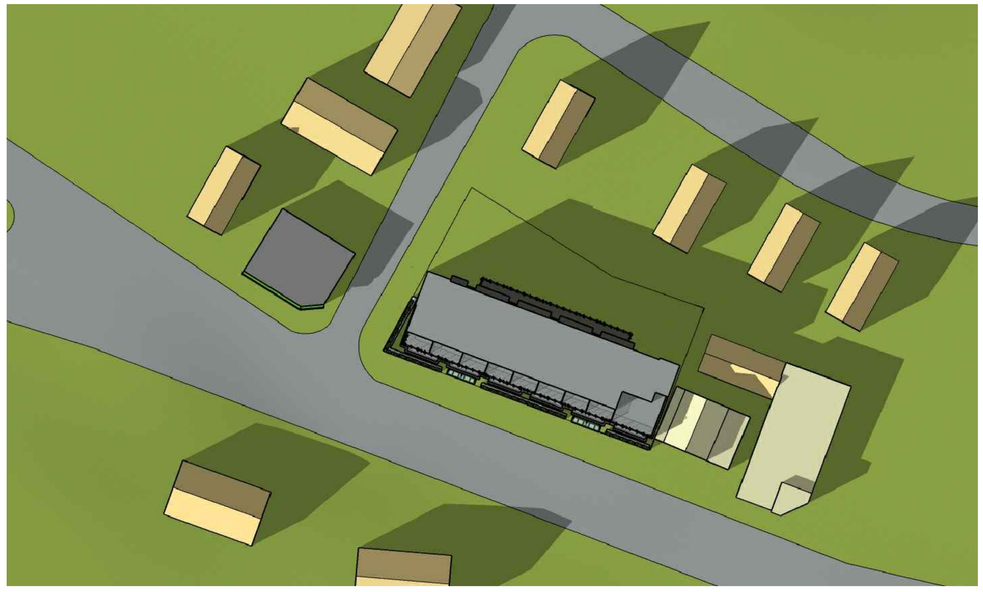
Autumn Equinox



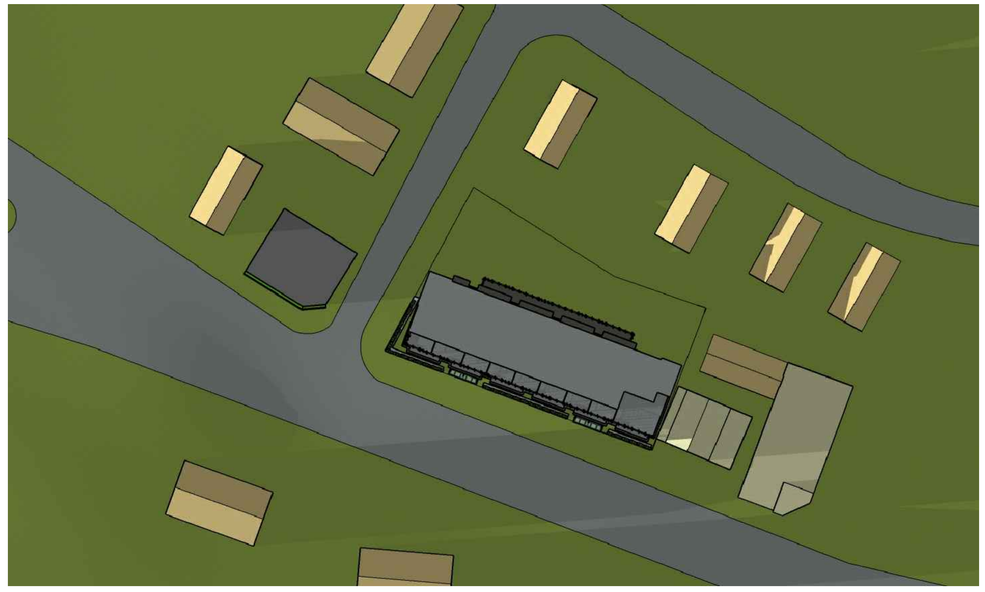
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Shadow Study

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue, Arlington MA
June 20, 2019

LINCOLN Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890

Spring Equinox



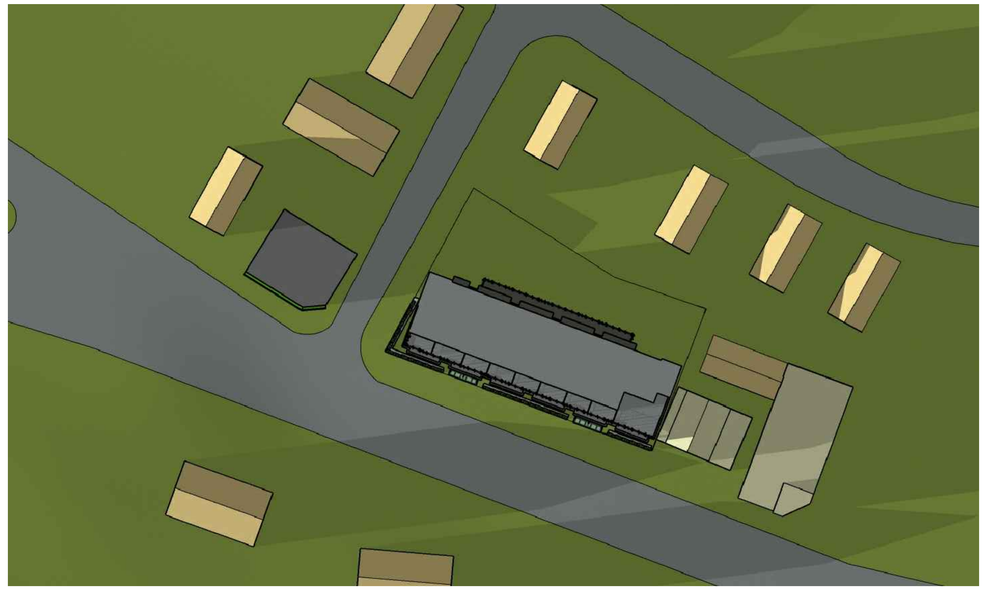
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Shadow Study

PROPOSED HOTEL COMPLEX

1211 Massachusetts Avenue, Arlington MA

June 20, 2019

LINCOLN Architects LLC
One Mount Vernon Street, Suite 203
Winchester Massachusetts 01890

PLANNING & COMMUNITY
DEVELOPMENT
2020 JAN 21 P 2:08

KRATTENMAKER O'CONNOR & INGBER P.C.

ATTORNEYS AT LAW

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BOSTON, MASSACHUSETTS 02109
TELEPHONE (617) 523-1010
FAX (617) 523-1009

CHARLES G. KRATTENMAKER, JR.
MARY WINSTANLEY O'CONNOR
KENNETH INGBER

OF COUNSEL: RAYMOND SAYEG

January 21, 2020

VIA EMAIL

Jennifer Raitt, Director
Department of Planning and Community
Development
Town of Arlington
730 Massachusetts Avenue
Arlington, MA 02476

Re: Docket No. 3602 / 1207-1211 Massachusetts Avenue

Dear Jenny:

Thank you for your memorandum of January 7, 2020. I will respond to the items raised in the order in which you have listed them.

1. A traffic study will be submitted by Mr. Doherty.

2. See the revised plans.

3. The revised plans show screening where the proposed mechanical's will be located. This also reflects a reduction in the proposed venting for the building at this time. It should be noted that the final locations will be determined on the IFC (Issued for Construction) plans and will not be visible to the surrounding neighborhood.

4. See the updated information attached as Exhibit "A".

5. See the updated information attached as Exhibit "B".

6. The petitioner will not be providing this information as it is proprietary and is not relevant to the relief requested.

7. This information was provided in the materials delivered on January 2, 2020. There are two properties with solar panels behind the subject property – 18 Pierce Street and 24 Clark Street. Neither is impacted.

8. See the updated information attached.

9. Resolved – no response required.

Comments provided by ARB:

1. A draft traffic study will be submitted by Mr. Doherty.

2. Updated information was included in the package delivered on December 2, 2019. Additional information will be provided with the submission on January 20, 2020.

3. Resolved – no response is required.

4. Resolved as indicated above. Additional detailed information will be included in the January 20, 2020 submission.

5. Detailed information will be included in the January 20, 2020 submission.

6. Resolved – no response required.

7. Resolved – no response required.

8. Resolved – no response required.

9. This has been revised and was included in the December 2, 2019 submission.

10. I would suggest that no parking is required for the restaurant as it is a prior nonconforming use. The DAV had a kitchen and restaurant and had no parking. I would suggest that this is substantially similar to the restaurant use being proposed for the Balich 5 & 10, where no parking is available on site.

11. Resolved – no response required.

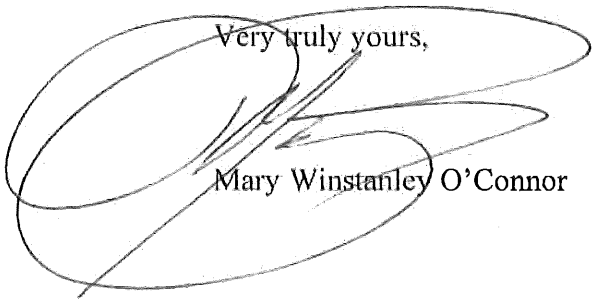
12. Resolved – no response required.

13. Resolved – no response required.

14. Updated information will be provided with the January 20, 2020 submission.

Please do not hesitate to contact me to discuss this matter. In advance, I thank you.

Very truly yours,



Mary Winstanley O'Connor

MWO/ccg
Enclosures
6214

cc: James Doherty

Exhibit A

The FAR for this proposal is 1.5 as provided for by the mixed use bylaws. As mentioned in your correspondence, Section 5.3.6 provides for bonus space based on certain criteria.

For this proposal we are requesting a modest increase of 10% or 2,104 s.f.. This request is based on the 'Public Access' provision and will provide for a public art and presentation area located in the front right area of the lot. We intend to provide through an easement to allow various groups the opportunity to have presentations and events for the community.

Exhibit B

As detailed on our revised plans, we are providing open space on three sides of the proposed building; the rear, left side and in front of the building. The open space will consist of a grass landscaped area and pervious paver area. The total will be 2,741 s.f.

Lighting

The lighting proposed for the site will consist of energy efficient LED low profile lighting. Deflectors and other technology will be utilize to ensure lighting does not spill into the neighborhood. To ensure the desired results are achieved, we will be conducting a photometric study prior to finalizing the installation.

BSC GROUP

MEMORANDUM

803 SUMMER STREET, BOSTON, MA 02127 - www.bscgroup.com
TEL 617-896-4300 - 800-288-8123

To:	James Doherty 1211 Massachusetts Avenue Realty Trust	**Date:**	January 16, 2020
From:	Michael A. Santos, PE	**Proj. No.**	28408.00
Re:	1211 Massachusetts Avenue – Arlington, MA Traffic Information Summary		

BSC Group, Inc. has conducted an evaluation of the transportation characteristics and impacts of the proposed hotel development to be located at 1211 Massachusetts Avenue (the "Project") in Arlington, Massachusetts. This evaluation provides information related to trip generation characteristics of the Project, vehicular circulation and operations on the site, and parking supply.

Project Description

The Project will consist of the construction of a new 50-room hotel and restaurant at 1211 Massachusetts Avenue. The Project site is located along the north side of Massachusetts Avenue and is adjacent to Clark Street on the west. Vehicular access will be provided by a valet operated pick-up/drop-off area with two curb cuts along Massachusetts Avenue. Access to the parking area will be along the east side of Clark Street, on the north side of the site.

The existing site consists of both 1207 and 1211 Massachusetts Avenue and contains a 2,500 square foot (sf) Disabled American Veterans (DAV) building, a used car dealership, an automobile service station, and a three-bedroom apartment, which contains 3,031 sf. There are currently two curb cuts along Massachusetts Avenue and one curb cut along Clark Street that provide access to the existing uses on the site. The DAV building recently closed and operated similarly to a restaurant. All uses on the existing site will be demolished as part of the Project.

Site Access

Vehicular access to the site will be limited to pick-up/drop-off and valet operations. A one-way, semi-circular driveway will be located at the front of the site, adjacent to Massachusetts Avenue. Two-curb cuts will be provided to allow westbound vehicular flow through the site, with the eastern curb cut operating as enter-only and the western curb cut operating as exit-only. An additional curb cut will be provided along the east side of Clark Street to provide access to the parking area in the rear of the building. Right-turns onto Clark Street northbound from the parking area will not occur, as the parking will be valet and controlled by the hotel operator.

Pedestrian access will be provided for the hotel lobby and the restaurant along Massachusetts Avenue. Sidewalks are currently provided along Massachusetts Avenue and Clark Street, with a painted crosswalk across Clark Street. The Project will upgrade all adjacent sidewalks, curb ramps, and crosswalks that serve the site to current standards set forth by the Americans with Disabilities Act (ADA). Bicycle racks will be provided for guests and visitors along Massachusetts Avenue. A secure and covered bicycle storage room will be provided within the lower level of the building for employees of the future uses on the site.

The Massachusetts Bay Transportation Authority (MBTA) operates the #77 and #79 buses along Massachusetts Avenue, adjacent to the Project site, with inbound and outbound stops immediately east of the site, near the intersection of Massachusetts Avenue/Appleton Street. Both buses provide access between Arlington Heights and the MBTA's Red Line. The #77 bus provides access to Harvard Station,

approximately 4.5 miles to the east, and the #79 bus provides access to Alewife Station, approximately 2.5 miles to the east.

Parking and Loading

The Project will provide a total of 27 parking spaces for the hotel uses. A tandem-style garage will be located in the rear of the building on the north side of the site and will contain 24 parking spaces. An additional three spaces will be located along the north side of the site in a surface lot. All parking on the site will be valet and will serve both the hotel and restaurant uses. The Project will not have any spaces for self-parking. On-street parking is allowed along both sides of Massachusetts Avenue. The Project will not change the overall number of available on-street parking spaces.

All loading and trash operations will occur in the rear of the building via the Clark Street curb cut. Deliveries will occur either in the pick-up/drop-off area or in the rear of the building, depending on the anticipated duration. Deliveries and loading operations will be limited to single-unit box trucks and smaller vehicles.

Trip Generation

Trip generation estimates for the Project are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. Trip generation estimates were developed for the proposed 50-room hotel. Table 1 presents the trip generation for the Project.

Table 1
Trip Generation Summary

	Project Trips			Existing Trips					
Time Period	Hotel[1]	Restaurant[2]	Total	DAV Club[2]	Auto Dealership[3]	Automobile Service Station[4]	Apartment[5]	Total	Net Change
AM Peak Hour									
Entering	14	15	29	15	1	3	0	19	+10
Exiting	10	13	23	13	0	1	1	15	+8
Total	24	28	52	28	1	4	1	34	+18
PM Peak Hour									
Entering	15	17	32	17	0	3	1	21	+11
Exiting	15	10	25	10	1	2	0	13	+12
Total	30	27	57	27	1	5	1	34	+23

1 Based on ITE Land Use Code (LUC) 310 – Hotel (50 Rooms)
2 Based on ITE LUC 932 – High Turnover Sit Down Restaurant (2,800 sf)
3 Based on ITE LUC 841 – Automobile Sales, Used (264 sf)
4 Based on ITE LUC 942 – Automobile Care Center (1,650 sf)
5 Based on ITE LUC 220 – Multi-Family Housing, Low-Rise (1 unit)

Based on the trip generation and mode share data, the Project is expected to generate 52 vehicle trips during the weekday morning peak hour and 57 vehicle trips during the weekday evening peak hour. When compared to the existing uses on the site, this results in a net increase of 18 trips during the weekday morning peak hour and 23 trips during the weekday evening peak hour.

The peak hour trips are typically the most critical because those time periods are when the adjacent roadways experience the highest traffic demands throughout the course of the day. The peak hour increases represent

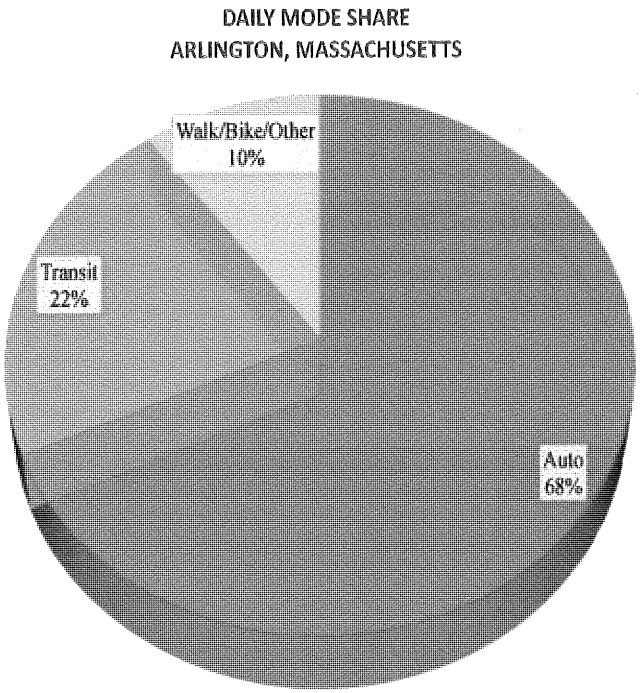
approximately one additional trip every 2-4 minutes.

The trip generation estimates provided in Table 1 do not consider alternative modes of transportation such as walking, bicycling, and transit usage. Based on the location of the site and the proximity to two highly used MBTA bus routes (Routes #77 and #79), it is expected that a portion of the trips will be made by public transportation. It is also expected that a portion of the hotel-related trips will be made by taxi or ride-hailing service and will not use Clark Street for parking purposes. The following section discusses the mode shares for travel in the vicinity of the Project.

Modes of Travel

Mode-split data for the census tract in Arlington in which the Project site is located were obtained from the United States Census. The primary modes of travel for the Project are expected to be transit, walk/bicycling, and vehicular usage. The US Census provides travel mode shares over the course of an average weekday for commuting purposes only. However, the mode shares to provide an insight into the availability and convenience of non-vehicular modes of travel. The mode shares for the census tract in which the Project site is located are presented in **Figure 1**.

Figure 1
Modes of Travel



As shown in Figure 1, the predominant mode of commuting travel in this area of Arlington is by vehicle (68 percent). Transit trips account for approximately 22 percent of travel and the remaining 10 percent of trips are made by walking, biking, or other travel modes.

As previously stated, the mode shares represent daily commuting trips. It is expected that the hotel and restaurant usage of the Project will include taxi trips and may not exactly reflect commuting patterns. Additionally, the restaurant will serve the hotel guests and residents of the surrounding neighborhoods, allowing for a further reduction in vehicle-based trips. Further, the commuter mode share percentages do indicate that there are opportunities other than driving for guests of the hotel once they are on-site.

Summary

This evaluation indicates that the proposed development is expected to generate a minimal amount of vehicular traffic during the commuter peak hours (approximately one new trip every 3-4 minutes). The Project is expected to have a minimal impact on the surrounding roadway network throughout most of the day. The periods that will experience the most impact will occur mostly during off-peak hours. Hotels typically have check-in times in the early afternoon and check-out times in the late morning, which occur

outside of commuter peaks. The restaurant will have the highest impacts after the weekday evening commuter peak hour when traffic volumes are typically lower.

The Project will provide on-site parking for 27 vehicles, which will be operated by the hotel's valet service. Self-parking will not be provided on the site. The parking will be valet-only and will be operated by te hotel. Right-turns from the parking area on to Clark Street northbound will not occur and the Project will have minimal impact to the residential neighborhood north of the site. All loading, trash servicing, and deliveries will occur on the Project site and will not have impacts to Massachusetts Avenue or Clark Street. As part of the Project, all adjacent sidewalks, crosswalks, and curb ramps will be upgraded in accordance with ADA standards.

LEED v4.1 BD+C: Hospitality

Project Checklist

Project Name: Lexington Hotel
Date: 1/20/2020

Y	?	N			
			Credit	Integrative Process	1

0	0	0	**Location and Transportation**		**16**
			Credit	LEED for Neighborhood Development Location	16
			Credit	Sensitive Land Protection	1
Y			Credit	High Priority Site	2
Y			Credit	Surrounding Density and Diverse Uses	5
Y			Credit	Access to Quality Transit	5
Y			Credit	Bicycle Facilities	1
Y			Credit	Reduced Parking Footprint	1
			Credit	Electric Vehicles	1

0	0	0	**Sustainable Sites**		**10**
Y			Prereq	Construction Activity Pollution Prevention	Required
			Credit	Site Assessment	1
			Credit	Protect or Restore Habitat	2
Y			Credit	Open Space	1
Y			Credit	Rainwater Management	3
Y			Credit	Heat Island Reduction	2
Y			Credit	Light Pollution Reduction	1

0	0	0	**Water Efficiency**		**11**
Y			Prereq	Outdoor Water Use Reduction	Required
Y			Prereq	Indoor Water Use Reduction	Required
Y			Prereq	Building-Level Water Metering	Required
Y			Credit	Outdoor Water Use Reduction	2
Y			Credit	Indoor Water Use Reduction	6
			Credit	Cooling Tower Water Use	2
Y			Credit	Water Metering	1

0	0	0	**Energy and Atmosphere**		**33**
Y			Prereq	Fundamental Commissioning and Verification	Required
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Building-Level Energy Metering	Required
Y			Prereq	Fundamental Refrigerant Management	Required
			Credit	Enhanced Commissioning	6
			Credit	Optimize Energy Performance	18
Y			Credit	Advanced Energy Metering	1
			Credit	Grid Harmonization	2
Y			Credit	Renewable Energy	5
			Credit	Enhanced Refrigerant Management	1

0	0	0	**Materials and Resources**		**13**
Y			Prereq	Storage and Collection of Recyclables	Required
Y			Prereq	Construction and Demolition Waste Management Planning	Required
			Credit	Building Life-Cycle Impact Reduction	5
			Credit	Building Product Disclosure and Optimization - Environmental Product	2
			Credit	Building Product Disclosure and Optimization - Sourcing of	2
Y			Credit	Building Product Disclosure and Optimization - Material In	2
Y			Credit	Construction and Demolition Waste Management	2

0	0	0	**Indoor Environmental Quality**		**16**
Y			Prereq	Minimum Indoor Air Quality Performance	Required
Y			Prereq	Environmental Tobacco Smoke Control	Required
			Credit	Enhanced Indoor Air Quality Strategies	2
Y			Credit	Low-Emitting Materials	3
			Credit	Construction Indoor Air Quality Management Plan	1
			Credit	Indoor Air Quality Assessment	2
Y			Credit	Thermal Comfort	1
Y			Credit	Interior Lighting	2
Y			Credit	Daylight	3
Y			Credit	Quality Views	1
Y			Credit	Acoustic Performance	1

0	0	0	**Innovation**		**6**
			Credit	Innovation	5
Y			Credit	LEED Accredited Professional	1

0	0	0	**Regional Priority**		**4**
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1

52	0	0	**TOTALS**	**Possible Points:**	**110**

40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum**

SPECIAL PERMIT - SITE PLAN REVIEW

1211 Massachusetts Avenue
Arlington, MA 02476

December 12, 2019

LINCOLN
Architects LLC

LINCON ARCHITECTS LLC
1 Mount Vernon Street, Suite 203
Winchester, MA 01890
781.721.7721

LOCUS PLAN



DRAWING LIST

ARCHITECTURAL

COVER SHEET
L1.1 EXISTING CONDITION DIAGRAM
L1.2 PROPOSED PLOT PLAN
L1.3 SITE PLAN / LANDSCAPING PLAN
A0.1 RENDERING IMAGE / VIEW FROM MASSACHUSETTS AVENUE
A0.2 RENDERING IMAGE / BIRDS EYE VIEW FROM MASSACHUSETTS AVENUE
A1.1 LOWER LEVEL/MAIN LEVEL FLOOR PLAN
A1.2 SECOND & THIRD FLOOR PLAN/FOURTH FLOOR PLAN
A4.1 BUILDING ELEVATIONS
A4.2 BUILDING ELEVATIONS
A5.1 EXISTING BUILDING - SHADOW STYDY/SUMMER SOLSTICE
A5.2 EXISTING BUILDING - SHADOW STYDY/WINTER SOLSTICE
A5.3 EXISTING BUILDING - SHADOW STYDY/AUTUMN EQUINOX
A5.4 EXISTING BUILDING - SHADOW STYDY/SPRING EQUINOX
A6.1 PROPOSED BUILDING - SHADOW STYDY/SUMMER SOLSTICE
A6.2 PROPOSED BUILDING - SHADOW STYDY/WINTER SOLSTICE
A6.3 PROPOSED BUILDING - SHADOW STYDY/AUTUMN EQUINOX
A6.4 PROPOSED BUILDING - SHADOW STYDY/SPRING EQUINOX



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Consultants

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Revisions

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
Arlington, MA

EXISTING CONDIRTIONS

Project Number
2017.032

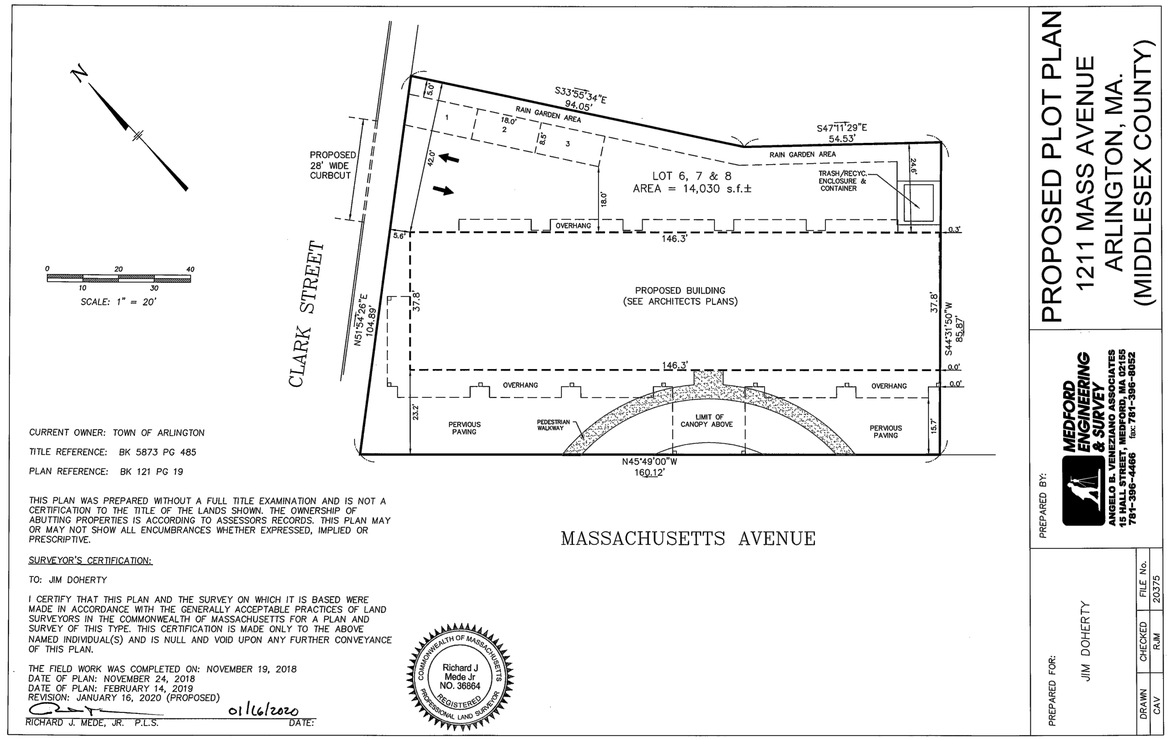
Drawing Scale
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Drawn By
GMc

Checked By
GMc

Date Issued
12/12/19

L1.1



CURRENT OWNER: TOWN OF ARLINGTON

TITLE REFERENCE: BK 5873 PG 485

PLAN REFERENCE: BK 121 PG 19

THIS PLAN WAS PREPARED WITHOUT A FULL TITLE EXAMINATION AND IS NOT A CERTIFICATION TO THE TITLE OF THE LANDS SHOWN. THE OWNERSHIP OF ABUTTING PROPERTIES IS ACCORDING TO ASSESSORS RECORDS. THIS PLAN MAY OR MAY NOT SHOW ALL ENCUMBRANCES WHETHER EXPRESSED, IMPLIED OR PRESCRIPTIVE.

SURVEYOR'S CERTIFICATION:

TO: JIM DOHERTY

I CERTIFY THAT THIS PLAN AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE GENERALLY ACCEPTABLE PRACTICES OF LAND SURVEYORS IN THE COMMONWEALTH OF MASSACHUSETTS FOR A PLAN AND SURVEY OF THIS TYPE. THIS CERTIFICATION IS MADE ONLY TO THE ABOVE NAMED INDIVIDUAL(S) AND IS NULL AND VOID UPON ANY FURTHER CONVEYANCE OF THIS PLAN.

THE FIELD WORK WAS COMPLETED ON: NOVEMBER 19, 2018
DATE OF PLAN: NOVEMBER 24, 2018
DATE OF PLAN: FEBRUARY 14, 2019
REVISION: JANUARY 16, 2020 (PROPOSED)

COMMONWEALTH OF MASSACHUSETTS
Richard J Mede Jr.
NO. 36864
REGISTERED PROFESSIONAL LAND SURVEYOR

RICHARD J. MEDE, JR. P.L.S. — DATE: 01/16/2020

PROPOSED PLOT PLAN
1211 MASS AVENUE
ARLINGTON, MA.
(MIDDLESEX COUNTY)

PREPARED BY:
MEDFORD ENGINEERING & SURVEY
ANGELO R. VENEZIANO ASSOCIATES
15 HALL STREET, MEDFORD, MA 02155
781-396-4466 fax:781-396-6652

PREPARED FOR:
JIM DOHERTY

DRAWN	CHECKED	FILE No.
CAV	RJM	20375

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Revisions

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
Arlington, MA

SITE PLAN

Project Number

Drawing Scale
1" = 20'

Drawn By
GMc

Checked By
GMc

Date Issued
12/12/19

L1.2

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Architects LLC

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Revisions

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
Arlington, MA

RENDERING

Project Number
2017.032

Drawing Scale
3/32"=1'-0"

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Checked By
GMc

Date Issued
12/12/19

A0.1



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Drawn By
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Checked By
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Revisions

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
Arlington, MA

RENDERING
STREET VIEW #1

Project Number
2017.032

Drawing Scale
N.T.S.

Drawn By
GMc

Checked By
GMc

Date Issued
12/12/19

A0.3



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Revisions

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
Arlington, MA

RENDERING
STREET VIEW #2

Project Number
2017.032

Drawing Scale
N.T.S

Drawn By
GMc

Checked By
GMc

Date Issued
12/12/19

A0.4



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PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
Arlington, MA

PLANTING PLAN

Project Number
2017.032

Drawing Scale
3/32"=1'-0"

Drawn By
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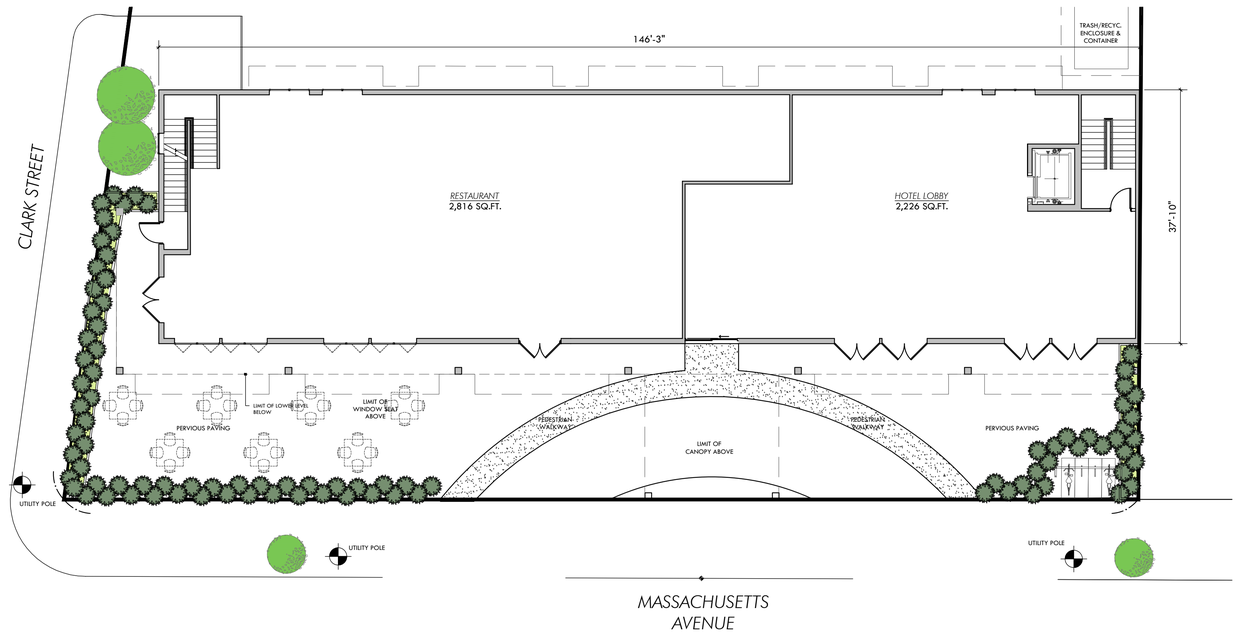
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GMc

Date Issued
12/12/19

L1.3



1 LOWER LEVEL FLOOR PLAN
A1.1 SCALE: 3/32"=1'-0"



2 FIRST FLOOR PLAN
A1.1 SCALE: 3/32"=1'-0"

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PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
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LOWER LEVEL
FIRST FLOOR
FLOOR PLANS

Project Number
2017.032

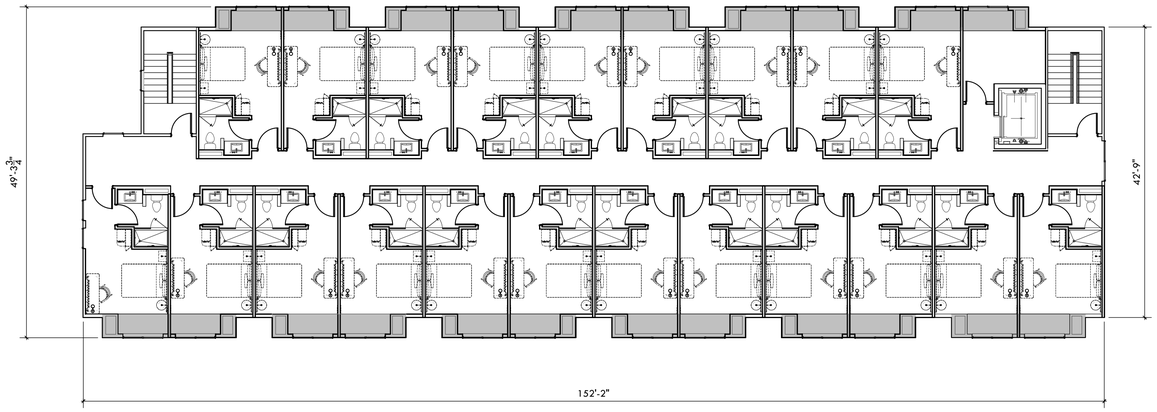
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Drawn By
GMc

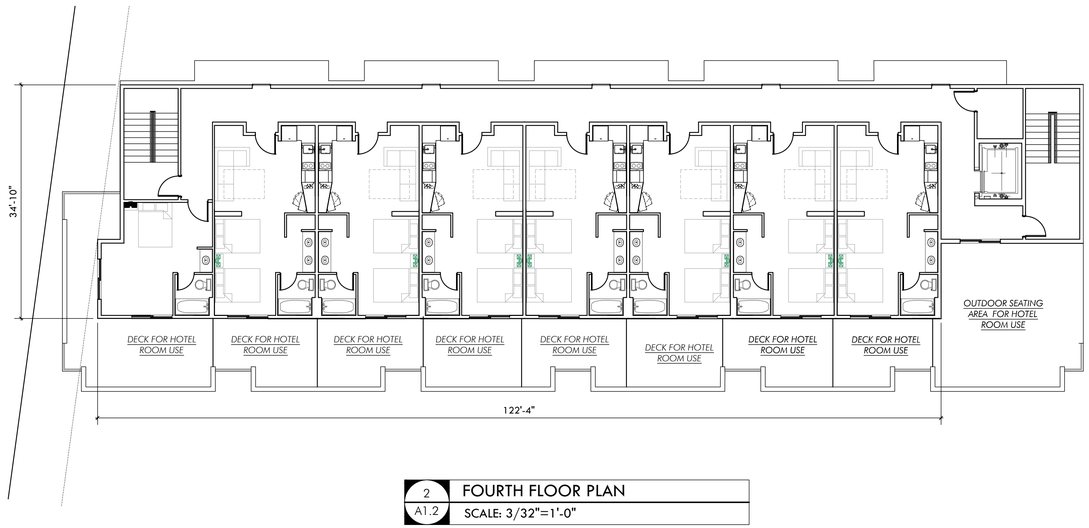
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A1.1



1 A1.2 — SECOND & THIRD FLOOR PLAN
SCALE: 3/32"=1'-0"



2 A1.2 — FOURTH FLOOR PLAN
SCALE: 3/32"=1'-0"

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PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
Arlington, MA

SECOND & THIRD FLOOR PLAN
FOURTH FLOOR PLAN

Project Number
2017.032

Drawing Scale
3/32"=1'-0"

Drawn By
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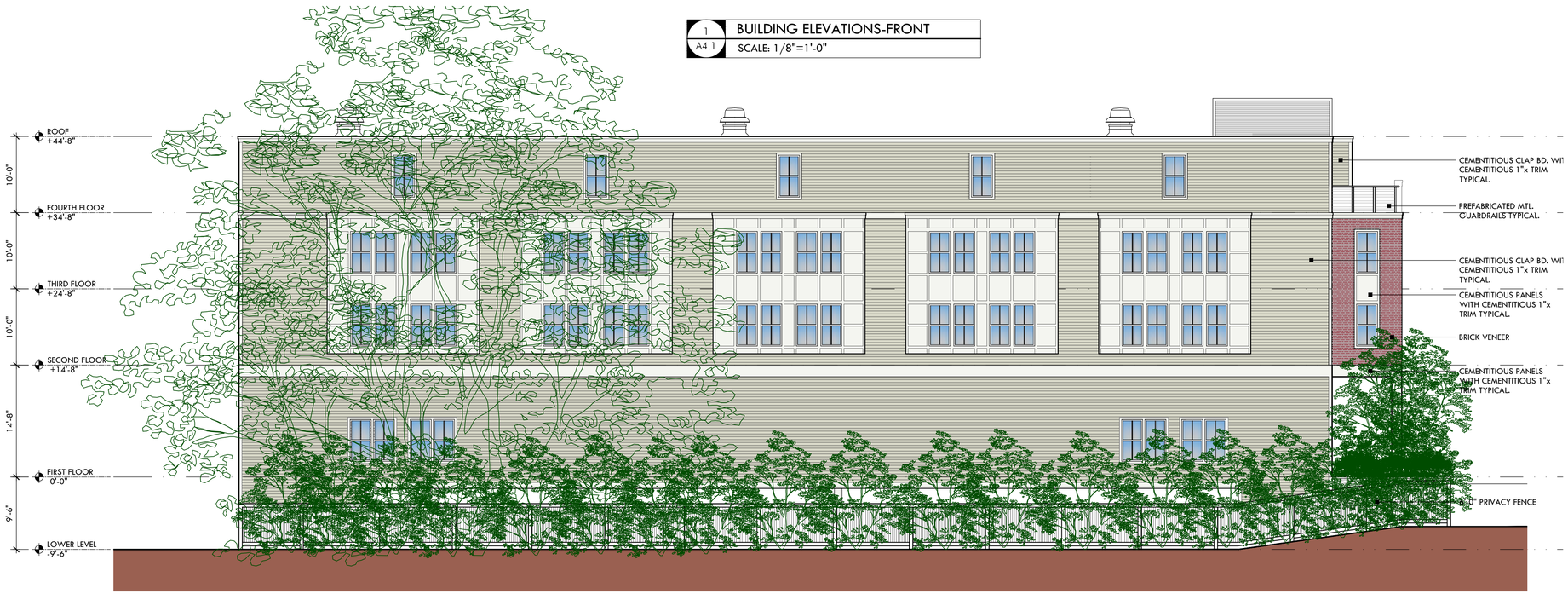
Checked By
GMc

Date Issued
11/21/19

A1.2



1 A4.1 BUILDING ELEVATIONS-FRONT
SCALE: 1/8"=1'-0"



2 A4.1 BUILDING ELEVATIONS- REAR
SCALE: 1/8"=1'-0"

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BUILDING ELEVATIONS

Project Number
2017.032

Drawing Scale
1/8"=1'-0"

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A4.1



1 / A4.2 BUILDING ELEVATIONS-SIDE
SCALE: 1/8"=1'-0"

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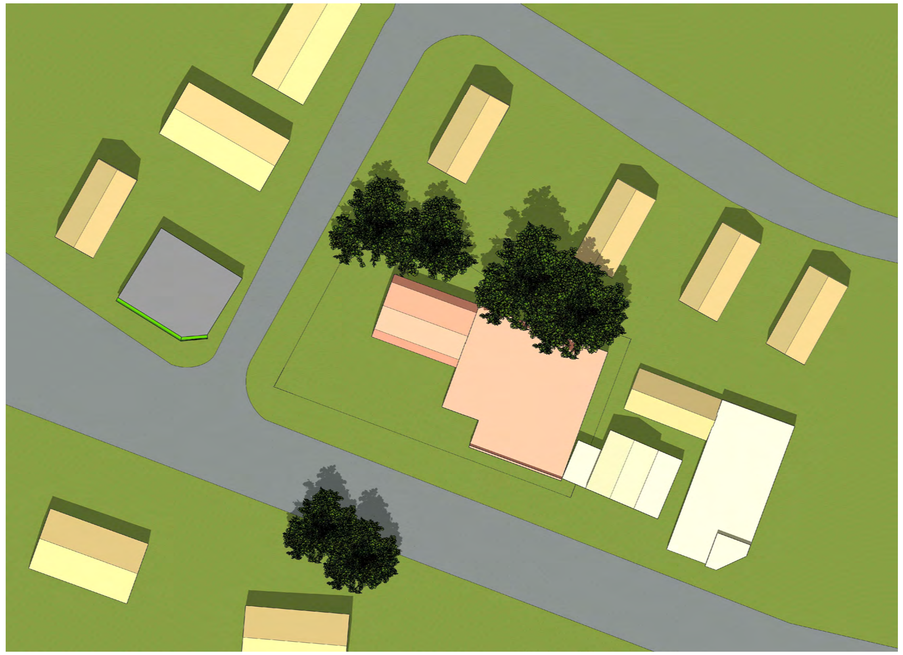
BUILDING ELEVATIONS

Project Number
2017.032
Drawing Scale
1/8"=1'-0"
Drawn By
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Revisions

PROPOSED HOTEL COMPLEX
1211 Massachusetts Avenue
Arlington, MA

SHADOW STUDY
EXISTING CONDITIONS
SUMMER SOLSTICE

Project Number
2017.032

Drawing Scale
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GMc

Date Issued
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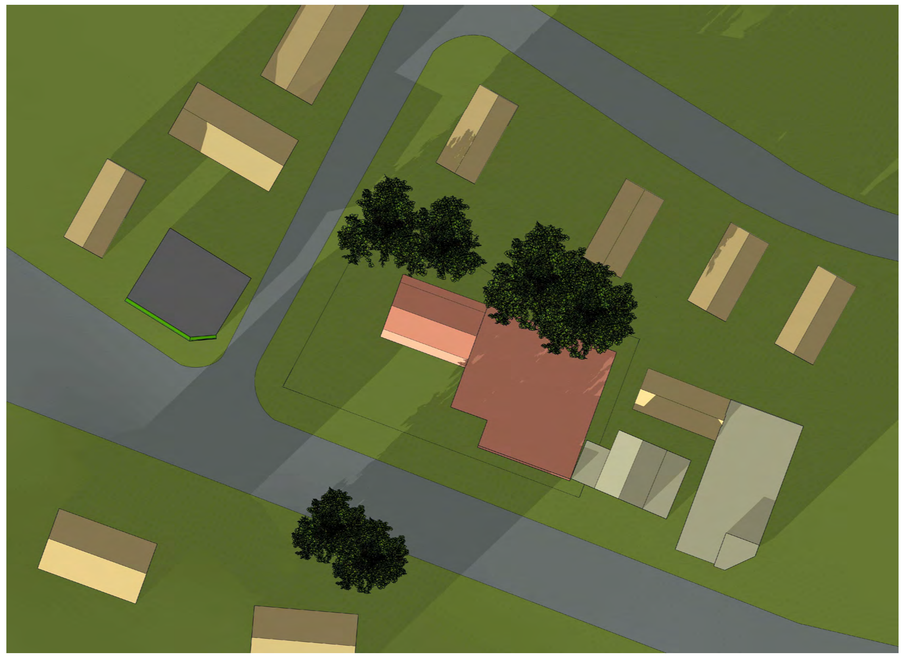
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SHADOW STUDY
EXISTING CONDITIONS
WINTER SOLSTICE

Project Number
2017.032

Drawing Scale
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GMc

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A5.2



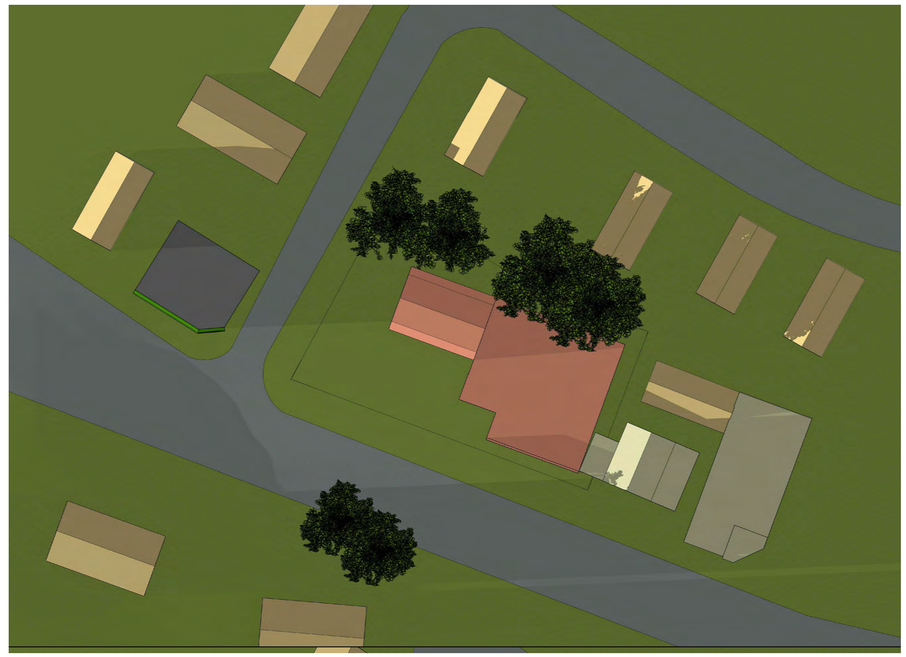
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SHADOW STUDY
EXISTING CONDITIONS
AUTUMN EQUINOX

Project Number
2017.032

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GMc

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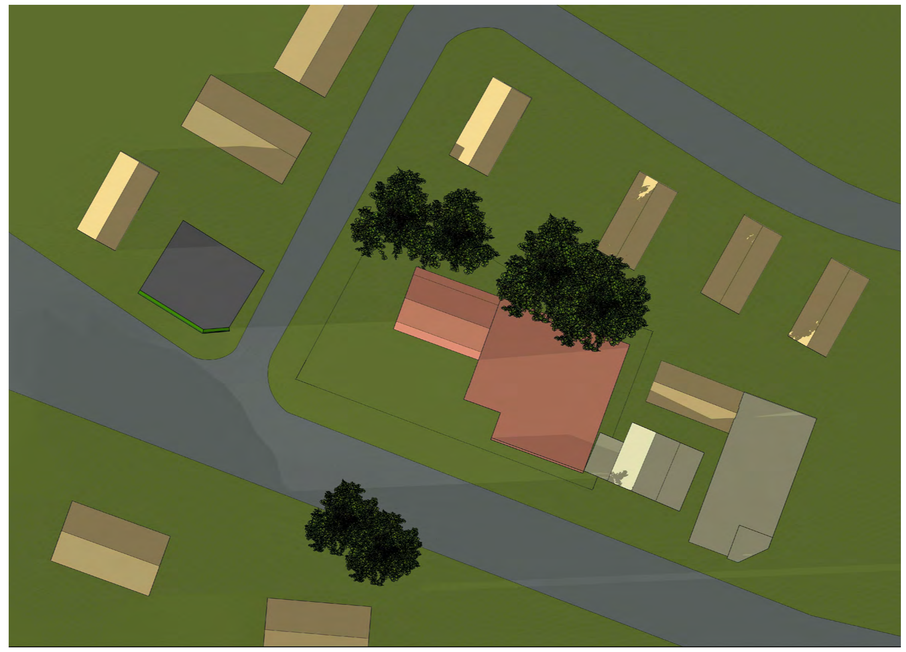
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SHADOW STUDY
EXISTING CONDITIONS
SPRING EQUINOX

Project Number
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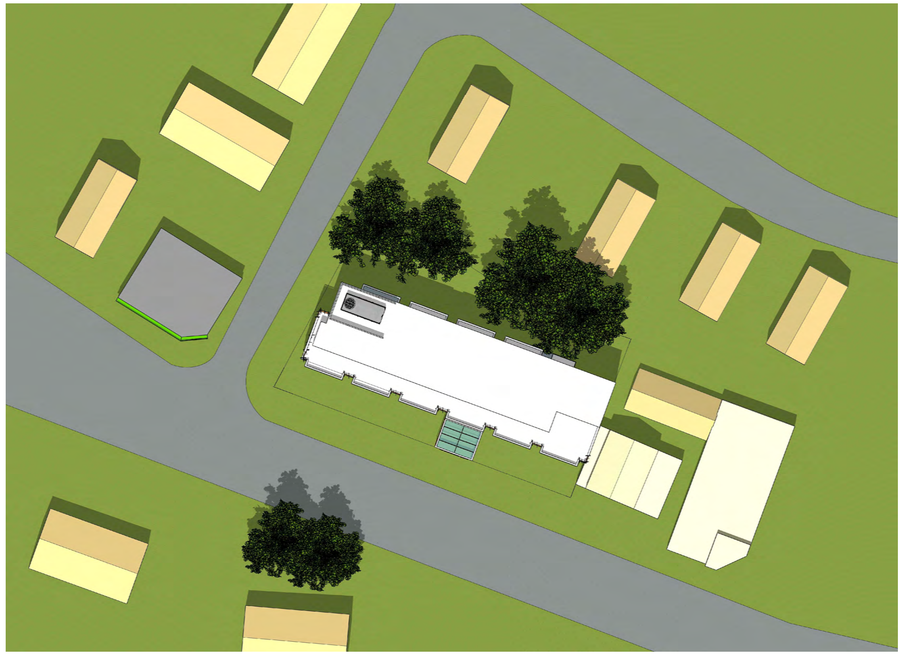
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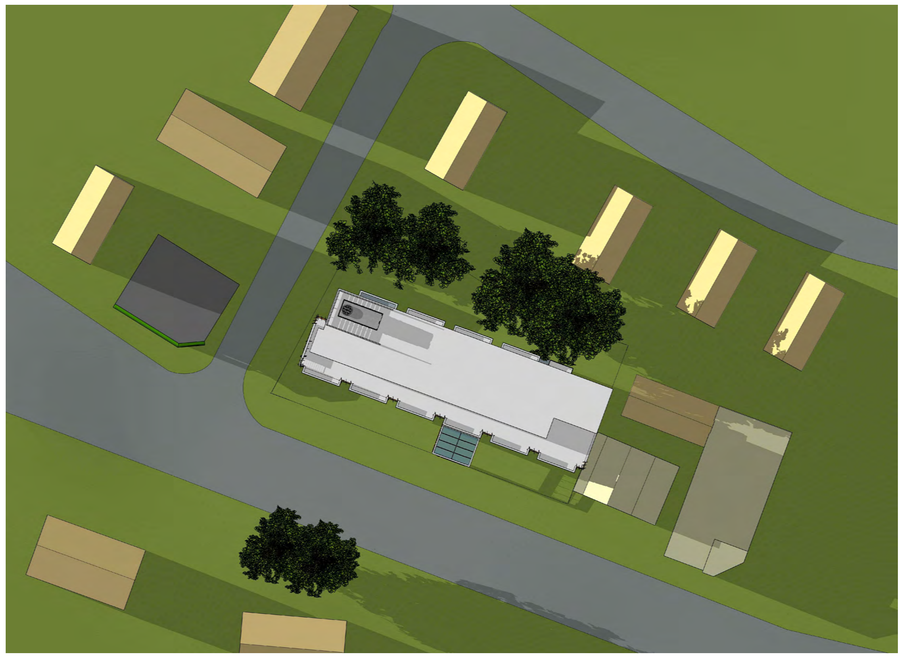
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Revisions

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Arlington, MA

SHADOW STUDY
PROPOSED BUILDING
SUMMER SOLSTICE

Project Number
2017.032

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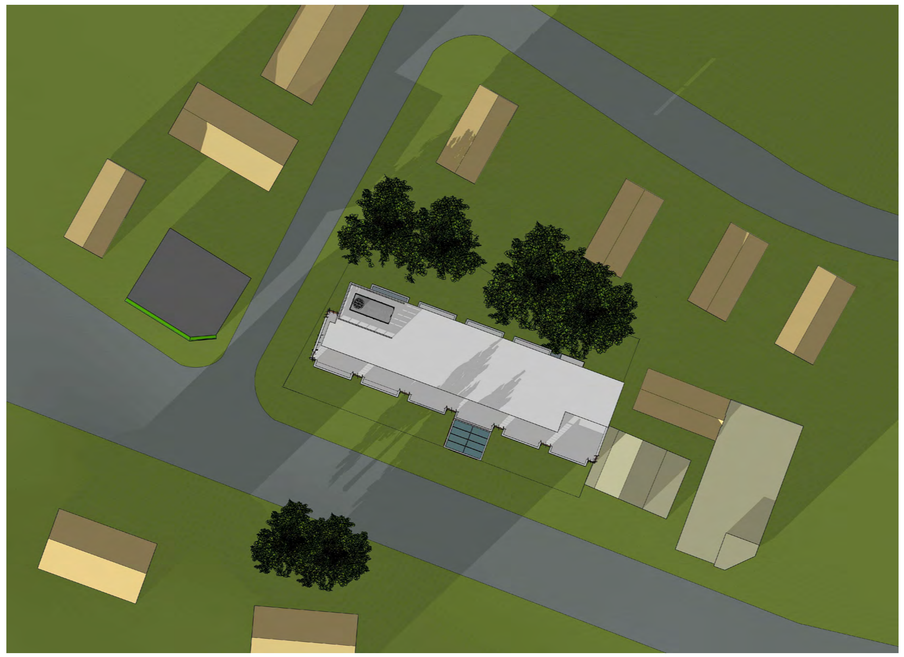
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SHADOW STUDY
PROPOSED BUILDING
WINTER SOLSTICE

Project Number
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Drawing Scale
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Date Issued
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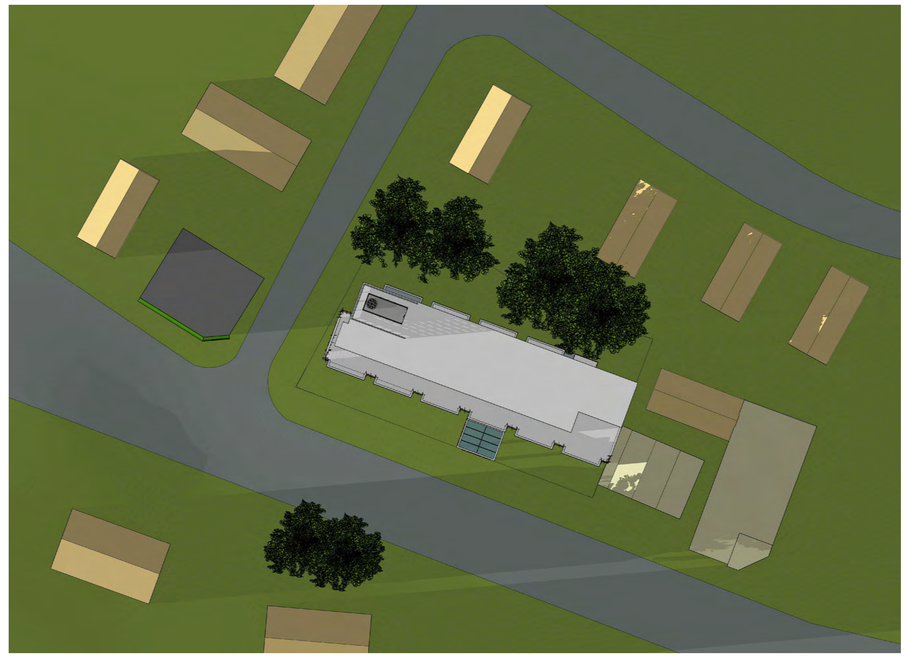
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SHADOW STUDY
PROPOSED BUILDING
AUTUMN EQUINOX

Project Number
2017.032

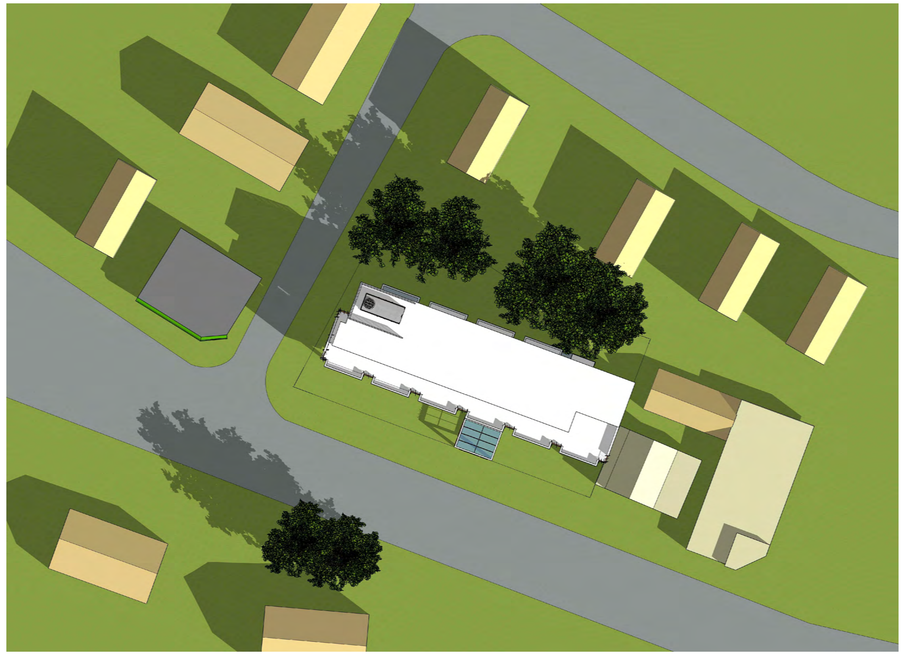
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Drawn By
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Date Issued
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A6.3



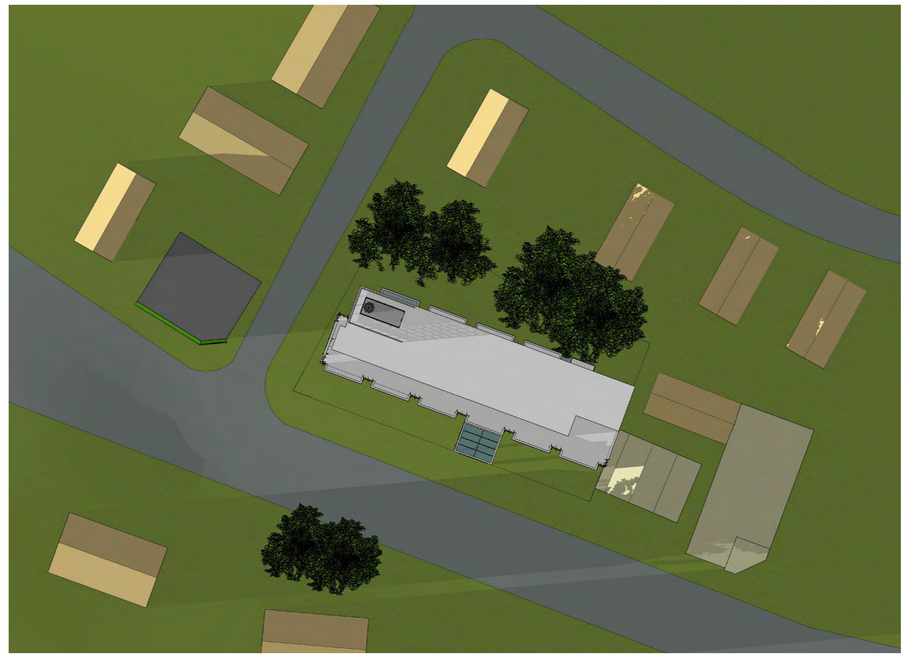
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SHADOW STUDY
PROPOSED BUILDING
SPRING EQUINOX

Project Number
2017.032

Drawing Scale
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GMc

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GMc

Date Issued
12/12/19

A6.4

Town of Arlington, Massachusetts

Department of Planning & Community Development

730 Massachusetts Avenue, Arlington, Massachusetts 02476

Public Hearing Memorandum

The purpose of this memorandum is to provide the Arlington Redevelopment Board and public with technical information and a planning analysis to assist with the regulatory decision-making process.

To: Arlington Redevelopment Board

From: Jennifer Raitt, Secretary Ex Officio

Subject: Environmental Design Review, 882-892 Massachusetts Avenue, Arlington, MA Docket #3625

Date: May 14, 2020

I. Docket Summary

This is an application by 882-892 Massachusetts Ave., LLC to demolish an existing one-story brick building and construct a mixed-use building at 882-892 Massachusetts Avenue. The proposed building is located in the B2 Neighborhood Business District per Section 5.5. The Board will review and approve the proposed construction under Section 3.4, Environmental Design Review, because the building is mixed-use. The proposed uses include 750 square feet of commercial space (one commercial use) and twenty-two (22) residential units comprised of eighteen (18) one-bedroom and four (4) studio units. The proposed project meets the threshold for the inclusionary housing requirements; therefore, three (3) units of the 22 total units must be made affordable per Section 8.2 of the Zoning Bylaw. The site is comprised of two adjoined lots: 882-888 Massachusetts Avenue and 890-892 Massachusetts Avenue.

Materials submitted for consideration of this application:
Application for EDR Special Permit, April 21, 2020
Supplemental information including dimensional and parking information, Plans and Rendering by Allen & Major Associates, Inc., correspondence from Kristen Welch, Greater Metropolitan Real Estate, LEED v4 for Building Design and Construction: Homes and Multifamily Lowrise checklist by Market Square Architects, LLC, Stormwater Management Plan, including Drainage Summary and Site Development Plan Set dated April 10, 2020 from Allen & Major Associates, Inc.

II. Application of Special Permit Criteria (Arlington Zoning Bylaw, Section 3.3)

1. Section 3.3.3.A.
The use requested is listed as a Special Permit in the use regulations for the applicable district or is so designated elsewhere in this Bylaw.

Mixed-use is allowed by Special Permit in the B2 Neighborhood Business District. The Zoning Bylaw, in Section 5.5.1 B, indicates that the district is intended for small retail and service establishments serving the needs of adjacent neighborhoods and oriented to pedestrian traffic; and mixed-use buildings. Mixed-use is a combination of two or more distinct land uses, such as those proposed by this applicant, and the definition encourages such uses to be located in a single, multi-story structure, such as that proposed by the applicant. The B2 Zoning District is limited to this one site. The adjacent zoning districts include B4, R6, B2A, and R2. The neighborhood includes mixed-use buildings, commercial buildings, Arlington High School, and a mix of residential buildings which includes single- and two-family homes and a neighboring 33-unit, 5-story apartment building. The Board can find that this condition is met.

2. Section 3.3.3.B.
The requested use is essential or desirable to the public convenience or welfare.

The requested use is essential and desirable. The second key finding in the Master Plan notes that "*Massachusetts Avenue has the capacity for growth. It can support mixed-use development commensurate with its function as Arlington's primary commercial corridor. Massachusetts Avenue is accessible to neighborhoods throughout the town; it has frequent bus service, bicycle routes, and good walkability. Increased density through greater building heights and massing would benefit the corridor from an urban design perspective and benefit the town from a fiscal perspective*."(p.8)

This proposal will bring twenty-two (22) new 1-bedroom and studio residential units, of which three will be affordable to households earning at or below 70% of the area median income, and one commercial space. The Town has clearly established affordable housing priorities described in its Housing Production Plan (adopted by the Select Board and Redevelopment Board and approved by the State in 2016). There continues to be a need to create new housing opportunities, including market-rate and affordable homes, in the community; this project helps address that demand. We recommend a mix of units to include a range of one-, two- and three-bedroom units.

Additionally, the commercial space could be convenient for the surrounding neighborhood which includes abutting residential, commercial, and institutional uses in the following districts: B4, R6, B2A, and R2. Furthermore, there is a supermarket approximately 150 feet from the property and additional neighborhood businesses in the immediate vicinity, including banks, restaurants, a pharmacy, gift shop, exercise studio, pre-school, and Arlington High School. A bus stop with shelter serving multiple routes is on Massachusetts Avenue directly in front of the building. The Board can find that this condition is met.

3. **Section 3.3.3.C.**
 The requested use will not create undue traffic congestion or unduly impair pedestrian safety.

 The proposed project includes 25 surface parking spaces for cars and forty (40) short- and long-term, indoor and outdoor spaces for bicycles, for building tenants and visitors. The proposed project improves pedestrian safety by reconstructing portions of the sidewalk and resetting granite curbing around the perimeter of the property on Lockland Avenue and Massachusetts Avenue. We recommend reducing parking for cars to increase the rear buffer. The project must increase long-term parking for bicycles as required in the Zoning Bylaw. The Board can find that this condition is met.

4. **Section 3.3.3.D.**
 The requested use will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested use or any developed use in the immediate area or in any other area of the Town will be unduly subjected to hazards affecting health, safety, or the general welfare.

 A Drainage Summary letter indicates that standards and been met with the proposed stormwater design, including the addition of landscaped areas to the site, a reduction of impervious area, and new catch basin and sump for treatment and reduction of runoff rates. The proposed project will improve, not overload, public utilities. The Board can find that this condition is met.

5. **Section 3.3.3.E.**
 Any special regulations for the use as may be provided in the Bylaw are fulfilled.

 As a condition of any decision for the proposed mixed-use building, the applicant will need to fulfill the requirements of the Affordable Housing bylaw, including making three units that are representative of the mix of units in the building available to eligible households making up to 70% of the area median income. Three units must be shown on the plan and all units must be equitably dispersed throughout the proposed building. There are no other special regulations for the use that must be fulfilled. The Board can find that this condition is met.

6. **Section 3.3.3.F.**
 The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health or welfare.

 The proposed building departs from the turn of the last century commercial block architecture as seen in the existing single-story brick building. The property owner explored redevelopment of the property in 1988 and the Board issued an Environmental Design Review Special Permit to allow the addition of up to six, two-bedroom apartments above the existing brick building. The addition was never developed and the permit eventually lapsed.

The requested mixed-use building is in keeping with adjacent land uses, particularly along Massachusetts Avenue. New residential units will not impair the integrity or character of the district or the adjoining districts and it will not be detrimental to health or welfare. The proposed structure is generally consistent with the Design Standards for the Town of Arlington. The proposal removes a more active ground floor uses which are encouraged along Massachusetts Avenue per the Design Standards.

The building materials will include a brick first story followed by clapboard on the 2nd story, fiber cement panels on the 3rd story, and a board and batten façade on the 4th story. Additional attention should be given to this façade and selected building materials; the applicant should improve the design pattern to enhance the building elevation and its prominence on the streetscape. The building includes a step back above the third story in order to minimize the building mass. The building also includes differentiation of the upper story and variation in the façade with added terraces on the top story, which is encouraged in the Design Standards. The building is also set back from the sidewalk and provides a buffer along Lockland Avenue. Bicycle parking is available and vehicular parking is located behind the building. Signage and wayfinding details should be provided by the applicant.

7. Section 3.3.3.G.

The requested use will not, by its addition to a neighborhood, cause an excess of the use that could be detrimental to the character of said neighborhood.

The use will not be in excess or detrimental to the character of the neighborhood. The Board can find that this condition is met.

III. Environmental Design Review Standards (Arlington Zoning Bylaw, Section 3.4)

1. EDR-1 Preservation of Landscape

The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soil removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

The property is almost entirely impervious and there is no natural landscape to preserve. As part of the project, approximately 1,470 square feet of impervious material will be replaced with landscaped areas, including 4 flowering trees and a combination of arborvitae, shrubs, and perennial plantings along the property edges. The new landscaping will improve the condition of the property and provide buffers along Lockland Avenue and along the adjacent building at 898 Massachusetts Avenue. An additional landscaped buffer along the eastern edge of the property would be possible if the number of parking spaces is reduced per Section 8.2 and the lot spacing reconfigured. We also recommend that higher caliper trees be planted rather than the

two proposed smaller caliper red maples and the one shadblow serviceberry smaller caliper tree. The Board can find that this condition is met.

2. **EDR-2 Relation of the Building to the Environment**

Proposed development shall be related harmoniously to the terrain and to the use, scale, and architecture of the existing buildings in the vicinity that have functional or visible relationship to the proposed buildings. The Arlington Redevelopment Board may require a modification in massing so as to reduce the effect of shadows on the abutting property in an R0, R1 or R2 district or on public open space.

There are a range of architectural styles in the vicinity. The proposed development is located in the B2 Neighborhood Business District which is limited to this one site which includes a parking lot and the existing single-story brick building. Heights in the vicinity range from single-story to five-story. The B2A District, across the street, includes a three-story mixed-use building on the former site of a garage. As the Town's Design Standards indicate, greater height in certain locations can be beneficial. The proposed building step-back helps to diminish the impact of overall building height. There is a modest set back from the sidewalk which differs from the existing building setback against the street edge. Improved building façade treatments that relate to the building's prominent location and a more active street level use would improve the overall relationship of the building to the environment.

3. **EDR-3 Open Space**

All open space (landscaped and usable) shall be so designed as to add to the visual amenities of the vicinity by maximizing its visibility for persons passing by the site or overlooking it from nearby properties. The location and configuration of usable open space shall be so designed as to encourage social interaction, maximize its utility and facilitate maintenance.

As noted above, the proposed project will add areas of landscaping to an existing impervious site. The proposal includes approximately 1,440 square feet of usable open space along the perimeter of the building, as well as plantings along Lockland Avenue and the western edge of the property. While the proposal meets the landscaped open space requirement at 10.2%, approximately 8% of additional usable open space is required to meet that requirement. The applicant should identify the areas of landscaped open space and usable open space on the site plan.

Additionally, the setback for the proposed building is on a corner lot meaning that the setback should be the same as an adjacent lot. On the Mass Ave frontage, the adjoining lot is an apartment building in R6 which would be approximately 19 ft. (15 ft + (height/10 ft)). On the Lockland frontage, the two-family is in R2 with a setback of 20 ft. The Board can adjust this requirement per Section 5.3.16.

Lastly, a buffer is required along the parking lot adjacent to the R2 lot on Lockland Ave.

4. EDR-4 Circulation

With respect to vehicular and pedestrian and bicycle circulation, including entrances, ramps, walkways, drives, and parking, special attention shall be given to location and number of access points to the public streets (especially in relation to existing traffic controls and mass transit facilities), width of interior drives and access points, general interior circulation, separation of pedestrian and vehicular traffic, access to community facilities, and arrangement of vehicle parking and bicycle parking areas, including bicycle parking spaces required by Section 6.1.12 that are safe and convenient and, insofar as practicable, do not detract from the use and enjoyment of proposed buildings and structures and the neighboring properties.

The proposed project includes 25 spaces for vehicles located at-grade at the rear of the property in an existing parking lot, including one HC vehicle space and outdoor bicycle parking. Improved sidewalks, curb cuts, and curb treatments are also proposed. Any such proposed improvements in the public right-of-way will require additional review and approval by the Engineering Department. The parking requirement is for mixed-use which calculates the parking required for each individual use; the parking required for the residential use totals 25 parking spaces, and while the commercial space would typically require two parking spaces, the first 3,000 square feet of non-residential space in mixed-use buildings is exempt from the parking requirements per Section 6.1.10.C. While the parking proposed meets the requirement, we recommend that this applicant utilize the available parking reductions in order to better maximize space on the lot and to meet buffer and open space requirements. With regard to meeting the long-term bicycle parking requirements, 10 additional spaces are needed to meet the requirement. The hanging bicycle rack designated for short-term parking in the mail room would only be allowed per Section 6.1.12.F. There are an additional 12 outdoor bicycle parking spaces as provided in a rack located in the parking lot. The required short-term parking is already met by being located inside. Therefore, the provision to provide short-term parking within 50 feet of the building entrance does not need to be met. Bike rack specifications are needed to determine compliance with Section 6.1.12.E.

Vehicle Parking Requirements*			
Number of Bedrooms/ Apartment Use	**Number of Units**	**Zoning Requirement**	**Total Parking Required**
1-bedroom	18	1.15	21
Studio	4	1	4
Total Proposed and Required Vehicle Parking			**25**
* First 3,000sf of non-residential space in mixed-use buildings is exempt.			
Bicycle Parking Requirements			
Use	**Short-Term Parking**	**Long-Term Parking**	

Residential	3 spaces	33 spaces
Office/ Retail	1 space	1 space
Total Required Bicycle Parking	**4**	**34**
Total Proposed Bicycle Parking	**9**	**24**

5. **EDR-5 Surface Water Drainage**

Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm drainage system. Available Best Management Practices for the site should be employed, and include site planning to minimize impervious surface and reduce clearing and re-grading. Best Management Practices may include erosion control and stormwater treatment by means of swales, filters, plantings, roof gardens, native vegetation, and leaching catch basins. Stormwater should be treated at least minimally on the development site; that which cannot be handled on site shall be removed from all roofs, canopies, paved and pooling areas and carried away in an underground drainage system. Surface water in all paved areas shall be collected in intervals so that it will not obstruct the flow of vehicular or pedestrian traffic and will not create puddles in the paved areas. In accordance with Section 3.3.4., the Board may require from any applicant, after consultation with the Director of Public Works, security satisfactory to the Board to insure the maintenance of all stormwater facilities such as catch basins, leaching catch basins, detention basins, swales, etc. within the site. The Board may use funds provided by such security to conduct maintenance that the applicant fails to do. The Board may adjust in its sole discretion the amount and type of financial security such that it is satisfied that the amount is sufficient to provide for any future maintenance needs.

The application materials, drainage summary letter, and site development plan show reconstruction of the existing parking lot and an improved stormwater management system. A new catch basin with a sump and hood at the outlet pipe will be installed to provide treatment. This is an improvement over the existing conditions. The proposed design complies with the Town's current stormwater bylaw. Final design materials must be submitted for review and approval by the Town Engineer.

6. **EDR-6 Utilities Service**

Electric, telephone, cable TV, and other such lines of equipment shall be underground. The proposed method of sanitary sewage disposal and solid waste disposal from all buildings shall be indicated.

All new utilities will be underground. The Board can find that this condition is met.

7. **EDR-7 Advertising Features**

The size, location, design, color, texture, lighting and materials of all permanent signs and outdoor advertising structures or features shall not detract from the use and enjoyment of proposed buildings and structures and the surrounding properties.

The applicant did not provide any indication on plans or drawing submitted of future sign locations, directories, lighting, and any other potential outdoor features relative to the building.

8. **EDR-8 Special Features**

Exposed storage areas, exposed machinery installations, service areas, truck loading areas, utility buildings and structures, and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall reasonably be required to prevent their being incongruous with the existing or contemplated environment and the surrounding properties.

The roofing plan provided indicates that roof structures are appropriately set back and that a parapet and additional screening will provide screening of said structures. The site plan shows an enclosed dumpster and recycling area located in the parking lot. The Board can find that this condition is met.

9. **EDR-9 Safety**

With respect to personal safety, all open and enclosed spaces shall be designed to facilitate building evacuation and maximize accessibility by fire, police and other emergency personnel and equipment. Insofar as practicable, all exterior spaces and interior public and semi-public spaces shall be so designed to minimize the fear and probability of personal harm or injury by increasing the potential surveillance by neighboring residents and passersby of any accident or attempted criminal act.

The proposed building has been designed to meet all relevant health and safety codes. A lighting plan was not provided as part of the plan set. These details are needed to assess safety criteria.

10. **EDR-10 Heritage**

With respect to Arlington's heritage, removal or disruption of historic, traditional or significant uses, structures or architectural elements shall be minimized insofar as practical whether these exist on the site or on adjacent properties.

The proposal will include demolition of the existing one-story brick building in order to build a new four-story building. Neither the existing structure nor adjacent structures have been deemed as being historic, traditional, or significant uses, structures, or architectural elements. The proposed massing and preliminary design for the proposed building are compatible with other uses in the immediate neighborhood. The Board can find that this condition is met.

11. **EDR-11 Microclimate**

With respect to the localized climatic characteristics of a given area, any development which proposes new structures, new hard surface, ground coverage or

the installation of machinery which emits heat, vapor or fumes shall endeavor to minimize insofar as practicable, any adverse impacts on light, air and water resources or on noise and temperature levels of the immediate environment.

Based upon materials provided in the application, there will be no adverse impacts on air and water resources or on temperature levels of the immediate environment. While the owner states that they do not contemplate installation of machinery that emits heat, vapors, or fumes in connection with the proposed building, additional plan details are needed with regard to lighting and emissions from machinery located on the roof to determine any impacts on the immediate environment. Mechanical specifications for the HVAC equipment should also be provided.

12. EDR-12 Sustainable Building and Site Design

Projects are encouraged to incorporate best practices related to sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Applicants must submit a current Green Building Council Leadership in Energy and Environmental Design (LEED) checklist, appropriate to the type of development, annotated with narrative description that indicates how the LEED performance objectives will be incorporated into the project.

The proposed building generates a LEED score that demonstrates the building could be LEED certified. We recommend that the proposed building aim to achieve higher LEED performance standards where possible, particularly in the following categories: energy and atmosphere and indoor environmental quality. The Board can find that this condition is met.

IV. Conditions

A. General

1. The final design, sign, exterior material, landscaping, and lighting plans shall be subject to the approval of the Arlington Redevelopment Board or administratively approved by the Department of Planning and Community Development. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board

2. Any substantial or material deviation during construction from the approved plans and specifications is subject to the written approval of the Arlington Redevelopment Board.

3. The Board maintains continuing jurisdiction over this permit and may, after a duly advertised public hearing, attach other conditions or modify these conditions as it deems appropriate in order to protect the public interest and welfare.

4. Snow removal from all parts of the site, as well as from any abutting public sidewalks, shall be the responsibility of the owner and shall be accomplished in accordance with Town Bylaws.

5. Trash shall be picked up only on Monday through Friday between the hours of 7:00 am and 6:00 pm. All exterior trash and storage areas on the property, if any, shall be properly screened and maintained in accordance with Article 30 of Town Bylaws.

6. The Applicant shall provide a statement from the Town Engineer that all proposed utility services have adequate capacity to serve the development. The applicant shall provide evidence that a final plan for drainage and surface water removal has been reviewed and approved by the Town Engineer.

7. Upon installation of landscaping materials and other site improvements, the Applicant shall remain responsible for such materials and improvement and shall replace and repair as necessary to remain in compliance with the approved site plan.

8. All utilities serving or traversing the site (including electric, telephone, cable, and other such lines and equipment) shall be underground.

9. Upon the issuance of the building permit the Applicant shall file with the Building Inspector and the Department of Community Safety the names and telephone numbers of contact personnel who may be reached 24 hours each day during the construction period.

10. Building signage will be filed with and reviewed and approved by the Department of Planning and Community Development and Inspectional Services.

B. Special Conditions

1. The owner will work with the Department of Planning and Community Development to comply with all requirements of Section 8.2, Affordable Housing Requirements.

2. The affordable units must be equitably dispersed throughout the building and shall be comparable to market-rate units in terms of location, quality and character, room size, number of rooms, number of bedrooms, and external appearance.

3. An Affordable Housing Deed Restriction shall be executed with the Town prior to issuance of an Occupancy Permit for the four affordable units.

4. No condominium conversion of said affordable rental units shall be permitted without the express permission of this Board. In the case of a proposed condominium conversion, Applicant shall work with the Department of Planning and Community Development to ensure that the units continue to meet the requirements of Section 8.2.

PETITION FOR SPECIAL PERMIT UNDER ENVIRONMENTAL DESIGN REVIEW

TABLE OF CONTENT

RE: 882-892 Massachusetts Avenue

1. Petition for Special Permit under Environmental Design Review
2. Supplemental Information with respect to Petition under Environmental Design Review
3. Required Submittals Checklist
4. Dimensional and Parking Information
5. Plans and rendering
6. Correspondence from Kristen Welch, Greater Metropolitan Real Estate
7. LEEDS
8. Storm water management plan

TOWN OF ARLINGTON
REDEVELOPMENT BOARD
Application for Special Permit In Accordance with Environmental Design Review Procedures (Section 3.4 of the Zoning Bylaw)

Docket No. _____

1. Property Address 882-892 Massachusetts Ave
 Name of Record Owner(s) 882-892 Massachusetts Ave, LLC Phone 781-654-6306
 Address of Owner 452 Massachusetts Ave., Ste 203 (Street), Arlington, MA 02474 (City, State, Zip)

2. Name of Applicant(s) (if different than above) Same as above
 Address _____ Phone _____
 Status Relative to Property (occupant, purchaser, etc.) _____

3. Location of Property Map 126, Block 1, Lots 6 and 7
 Assessor's Block Plan, Block, Lot No.

4. Deed recorded in the Registry of deeds, Book 1523, Page 101;
 -or- registered in Land Registration Office, Cert. No. _____, in Book _____, Page _____.

5. Present Use of Property (include # of dwelling units, if any) Retail, Service, Restaurant

6. Proposed Use of Property (include # of dwelling units, if any) Mixed-Use
 22 Apartment Units, 700 SF Retail

7. Permit applied for in accordance with the following Zoning Bylaw section(s)

section(s)	title(s)
3.4	Environmental Design Review
5.26	Open Space
5.53	Mixed-Use

8. Please attach a statement that describes your project and provide any additional information that may aid the ARB in understanding the permits you request. Include any reasons that you feel you should be granted the requested permission.

 See Attached

(In the statement below, strike out the words that do not apply)

The applicant states that 882-892 Massachusetts Ave, LLC is the owner -or- occupant -or- purchaser under agreement of the property in Arlington located at 882-892 Massachusetts Ave which is the subject of this application; and that unfavorable action -or- no unfavorable action has been taken by the Zoning Board of Appeals on a similar application regarding this property within the last two years. The applicant expressly agrees to comply with any and all conditions and qualifications imposed upon this permission, either by the Zoning Bylaw or by the Redevelopment Board, should the permit be granted.

Signature of Applicant(s)

1171 Mass Ave., Arlington, MA 02476 (Address) 781-646-4911 (Phone)

TOWN OF ARLINGTON
REDEVELOPMENT BOARD
Petition for Special Permit under Environmental Design Review (see Section 3.4. of the Arlington Zoning Bylaw for Applicability)

1. Preservation of Landscape.

Landscaping has been provided on the submitted plans and one parking space has been eliminated in order to add green space to the site and in addition tree plantings are proposed along the Lockland Avenue side of the property which abuts the residential neighborhood.

2. Relation of Buildings to Environment.

The existing site contains a number of small retail stores with the height of the existing building comprising the stores being one story. Petitioner proposes a four story residential commercial mixed use building at the site and suggests to the Members of the Arlington Redevelopment Board that the proposed building will relate harmoniously to the terrain and to the use, scale and architecture of existing buildings in the vicinity of the property. The abutting building on the westerly side of the site consists of a six story apartment building and the proposed building will not adversely impact that abutting apartment building but essentially will be compatible with the physical characteristics of that building. The building fronts on Massachusetts Avenue and the property located along the easterly side of the property across Lockland Avenue consists of a bank with a large parking lot and a drive up teller operation.

The building across Massachusetts Avenue consists of a mixed use building recently approved by the Arlington Redevelopment Board consisting of three retail units on the first level and 2, two bedroom units on the second level and 2, two bedrooms units on the third level with parking located to the rear of that building.

The building which is the subject of this Petition has been designed having in mind that its physical characteristics should not have an adverse massing effect on the residential properties to the rear of the building and also not create a

shadow impact with respect to the residential properties.

3. Open Space.

The landscaped open space at the property would improve with respect to the construction with landscaped square feet being increased from 0 square feet to 1,470 square feet, i.e. 10.2%. The useable open space would be 1,707 square feet, i.e. 11.9% and would require a Special Permit.

4. Circulation.

The circulation with respect to vehicular, pedestrian and bicycle circulation, including entrances and exits are shown on Petitioner's plans and provide for twenty-five (25) parking spaces, outdoor bicycle racks, an indoor short-term bicycle room and a long-term bicycle room which would be accessed by an elevator down to the basement level. All vehicular traffic will enter and exit on the Lockland Avenue side of the property and relevant signage will direct traffic in and out of the parking area.

The total parking spaces at the property will in part consist of a long-term storage bicycle room in the basement which will have the capacity to store twenty-four bicycles with the tenants taking the elevator down one story to that storage room and tenants will also have the option to use other storage areas which are rather of a large capacity in the basement for storage of their bicycles as well.

On the first floor of the building there will be a combination mailroom with "hanging short term" bicycle storage for nine (9) bicycles and the entrance to that room would occur as one rounds Massachusetts Avenue onto Lockland Avenue onto a flat surface with no stairs of any kind being utilized with the result that tenants will have direct access to that short-term bicycle room. There will also be two (2) outdoor short-term bicycle storage racks which will be able to hold another eight to ten bicycles.

The total capacity for bicycle store at the property will be at least forty (40) bicycles.

5. Surface Water Drainage.

The Petitioner has engaged the services of Allen & Major Associates and that firm has conducted a storm water management study and has drafted a mixed-use redevelopment drainage summary letter dated February 26, 2020 which is addressed to Jennifer Raitt, Director of Planning and Community Development describing the existing conditions at the site and proposed conditions at the site.

The report in part provides that the Petitioner proposes to demolish the existing structure and construct a four story 4,693 square foot mixed use building with a combination of residential and retail uses.

There will be twenty-two (22) residential apartments and a 700 square foot retail component and the parking area would be reconstructed within the constraints of the existing pavement area.

The storm water management system would be improved with the installation of a new catch basin with a sump and hood at the outlet pipe to provide storm water treatment. The quantity of storm water runoff would be reduced with the installation of landscaped areas on site as shown on Petitioner's plans.

The proposed work would result in approximately 1,440 square feet of imperious material being replaced with landscaped areas.

Runoff flows were estimated for both pre and post development conditions and the chart in the study points No. 1 and No. 2 contained on the second page of the report demonstrate that flows will enter the on-site catch basin and discharge to the municipal drainage system. In addition the storm water flows that flow onto Massachusetts Avenue will be collected within the street catch basin.

Both study points show that the project will cause a reduction in the peak rate of runoff and volume of storm water leaving the site at both study points No. 1 and No. 2.

In summary, the report indicates that the proposed development will have a positive impact on the sewer water management system by reducing the rate and volume of storm water runoff from the site.

Aaron Mackey, the Representative of Allen & Major Associates has spoken with the Town Engineer with respect to the proposed construction and the Town Engineer has indicated his approval of the storm water drain management system proposed by Petitioner.

6. Utility Service.

All utility service will be located underground.

7. Advertising Features.

There are currently no plans for advertising although advertising signs may be required once a tenant is signed up for the commercial space. It would be the Petitioner's expectation that the signage required could be handled administratively with the Planning Department but if that is not the case then of course a Special Permit would be required.

The owner has indicated that there is a possibility of having an office tenant occupy all of the 700 square feet of commercial base.

8. Special Features.

All equipment servicing the building will be located on the roof such as heating, air conditioning, etc. and will be set back in such a fashion that most of it will be buffered from the view of individuals at ground level by the building parapet. The dumpsters and the totes are located in the back of the property as shown on Petitioner's plans and are sufficient for the needs of both the residential tenants and any future commercial tenants as well.

9. Safety.

The access to and from the parking area at the building is sufficient for fire apparatus to access the property from the parking lot as well as any emergency personnel and equipment.

10. Heritage.

The property is not on the Arlington Historical list and is not in a historical district.

11. Microclimate.

The owner does not contemplate that there will be any installation of machinery which emits heats, vapor or fumes from the site in connection with the proposed construction.

12. Sustainable Building and Site Design.

Petitioner has submitted a LEED checklist prepared by Market Square Architects, LLC entitled: LEED v4 for Building Design and Construction: Homes and Multifamily Lowrise - Project Name: 882-892 Massachusetts Ave, Arlington, MA 02476 – dated March 26, 2020.

The substance of the checklist shows the type of building materials to be used at the site and will demonstrate how the LEED performance objectives will be incorporated into the project.

In addition, projects subject to Environmental Design Review must address and meet the following Special Permit Criteria (see Section 3.3.3 of the Zoning Bylaw):

1. The use requested is listed as a special permit in the use regulations for the applicable district or is so designated elsewhere in this Bylaw.

 See Section 3.4 of the Zoning Bylaw and Section 5.5.3 of the Zoning Bylaw which allows an apartment building in a B2 zone.

2. The requested use is essential or desirable to the public convenience or welfare.

 It has become more and more apparent over the last year or two that there is dire need for additional residential living space, not only in the Town but in the State as well. The Master Plan for the Town encourages owners and developers to create additional living space in the Town, therefore the creation of twenty-two (22) additional residential units would be essential or desirable to the public convenience or welfare. There will be three (3) affordable housing units located in the building.

3. The requested use will not create undue traffic congestion or unduly impair pedestrian safety.

 Proper and adequate steps have been taken to design the parking and traffic circulation at the site appropriately so that there will not be impairment of pedestrian safety.

4. The requested use will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested use or any developed use in the immediate area or in any other area of the Town will be unduly subjected to hazards affecting health, safety or the general welfare.

 The requested use will not overload any public water, drainage or sewer system or any other municipal system to such an extent that the requested use or any developed use in the immediate area or in any other area of the Town will be unduly subjected to hazards affecting health, safety or the general welfare.

5. Any special regulations for the use as may be provided in this Bylaw are fulfilled.

 Not applicable.

6. The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health, morals or welfare.

The requested use will not impair the integrity or character of the district or adjoining districts, nor be detrimental to the health, morals or welfare of inhabitants of the Town or the neighborhood in which the property is located because the construction will occur in a mixed commercial and residential area fronting on Massachusetts Avenue which is mainly commercial in the neighborhood of the property and the proposed construction will not adversely impact neighboring properties whether commercial or residential.

7. The requested use will not, by its addition to a neighborhood, cause and excess of the particular use that could be detrimental to the character of said neighborhood.

 The proposed construction will not cause an excess of that use in the neighborhood of the property, particularly so in light of the fact that there is a need for additional residential living space and the creation of additional living space is encouraged by the Town Master Plan and the Amended Zoning Bylaw.

SUPPLEMENT INFORMATION WITH RESPECT TO PETITION UNDER ENVIROMENTAL DESIGN REVIEW
SECTION 3.4 of the Arlington Zoning Bylaw

The 822-892 Massachusetts Avenue real estate contains a lost size of 14,381 square feet and is identified on the Town's Tax Map 126 Block 1 as Lots 6 and 7 with Lot 6 covered by an existing one story brick building containing approximately 4,780 square feet consisting of four separate retail stores and Lot 7 consisting of a paved parking area comprising the balance of the property of 9,595 square feet.

The property is located in a B2 Zone as defined within the Arlington Zoning Bylaw.

Petitioner proposes to construct a twenty-two (22) unit mixed use development at the property after demolishing the existing building.

The Petition for Zoning Relief is filed under Section 3.4., i.e. Environmental Design Review as well as the mixed use section of the bylaw defined in the Table of Dimensional and Density Regulations D District Lot Regulations, Sections 526 through 530.

Petitioner proposes in addition to the twenty-two (22) one bedroom residential units to have an office use within the building containing approximately 700 square feet.

The building would contain four stories and there would be twenty-five (25) parking spots within the paved parking portion of the property.

Access to the parking area would be through the curb cut which currently exists on the Lockland Avenue easterly side of the property onto Lockland Avenue.

There would be clearly marked signs indicating the entrance and exist points to and from the parking lot and the parking spots would be clearly marked and lined and would also comply with the parking regulations contained within the Zoning Bylaw with respect to length and width.

The building itself would contain three (3) affordable housing units and there would be ample bicycle parking provided for both with respect to outside bicycle racks, an indoor short term bicycle room and an indoor long term bicycle room. In addition residents would have ample room in their storage units to store bicycles if they so desired.

The proposed bicycle rooms and bicycle parking are depicted on the plans submitted with the Petitioner's Application.

The landscaped space at the property would improve with respect to the construction with the landscaped square feet being increased from 0 square feet to 1,470 square feet, i.e. 10.2%. The useable open space would be 1,707 square feet, i.e. 11.9% and would require a Special Permit.

The front yard setback of the property is currently 0 feet and would be increased 2.8 feet while the zoning requirement in a mixed use development would be 0 feet.

The right side yard setback which is currently 53.6 feet would be increased to 65.3 feet and the left side yard setback would be increased from 1.3 feet to 1.9 feet.

The height of the building would increase from one story to four stories or from 13.5 feet to 39 feet while the zoning bylaw allows a 50 foot height.

The floor area ratio which is presently 0.35 would increase to 1.25 while the maximum required by the zoning bylaw is 1.50.

The abutting property on the westerly side of the building is a six floor multi-unit apartment building and the property located on the easterly side of Lockland Avenue consists of a large parking area and a bank while the abutter properties to the rear consist of residential properties.

Directly across the street is a three level building recently approved by the Arlington Redevelopment Board for three retail stores on the first level, 2 two-bedroom residential units on the second floor and 2 additional two-bedroom units on the second level.

Diagonally across Massachusetts Avenue there is a large Stop & Shop store complex with an accompanying parking area and a liquor store located between the Stop & Shop store and the building mentioned previously recently approved by the Arlington Redevelopment Board.

The Arlington High School is located diagonally across from the property in a north-easterly direction.

The property is located in a long existing mixed use area with a combination of residential and commercial uses with the uses mainly located on Massachusetts Avenue being commercial uses.

Petitioner's plans have been designed to comport with the provisions of the zoning bylaw at Section 5.5.1, further subsection (b) which defines a B2 Zoning District as follows:

B2: Neighborhood Business District. The Neighborhood Business District is intended for small retail and service establishments serving the needs of adjacent neighborhoods and oriented to pedestrian traffic, and mixed-use buildings. Locations are almost all along Massachusetts Avenue or Broadway. The Town discourages uses that would detract from the district's small-scale business character or otherwise interfere with the intent of this Bylaw.

The property has been the subject of prior zoning cases in 1988 and 1991 before the Zoning Board of Appeals for special permits and not for variances and those zoning cases would now be superseded by any action of the Arlington Redevelopment Board with respect to its Special Permit authority under Environmental Design Review and with respect to the Special Permit relief requested by Petitioner.

The owners of the property have indicated their preference for twenty-two (22) one bedroom residential units with respect to the development in part based upon a report they have obtained from Greater Metropolitan Real Estate at 872 Main Street, Winchester, Massachusetts, Kristen Welch, the substance of which indicates that following a study of the real estate market in Arlington and particularly in the neighborhood of the property which is the subject of the

Petition that studio and one bedroom units are always the most sought after and have always been rented fairly quickly.

Two bedroom units will rent but will take longer according to Ms. Welch. She indicates that on average two professional roommates are the most likely clients for a two or even a three bedroom unit and they are willing to pay the higher rental amount attributable to the multi bedroom units.

She indicates that the high rents for such units do not generally attract families.

She further indicates that with proximity to the bike path and bus line most of her clients are young professionals who use the proximity to the bike path and use the adjacent bus line for travelling to and from work in Cambridge, Boston or other nearby cities and towns.

She indicates that she does represent families but the families she represents are mainly looking for a multi-family or single family home with a yard.

Town of Arlington Redevelopment Board
Application for Special Permit in accordance with
Environmental Design Review (Section 3.4)

Required Submittals Checklist

Two full sets of materials and one electronic copy are required. A model may be requested. Review the ARB's Rules and Regulations, which can be found at arlingtonma.gov/arb, for the full list of required submittals.

__X__ Dimensional and Parking Information Form (see attached)

__X__ Site plan of proposal

__N/A__ Model, if required

__X__ Drawing of existing conditions

__X__ Drawing of proposed structure

__X__ Proposed landscaping. May be incorporated into site plan

__X__ Photographs

__X__ Impact statement

__N/A__ Application and plans for sign permits

__X__ Stormwater management plan (for stormwater management during construction for projects with new construction

FOR OFFICE USE ONLY

_____ Special Permit Granted Date: _____

_____ Received evidence of filing with Registry of Deeds Date: _____

_____ Notified Building Inspector of Special Permit filing Date: _____

TOWN OF ARLINGTON
Dimensional and Parking Information
for Application to
The Arlington Redevelopment Board

Docket No. _____

Property Location 882-892 Massachusetts Ave

Zoning District B2

Owner: 882-892 Massachusetts Ave, LLC

Address: 452 Massachusetts Ave, Arlington, MA

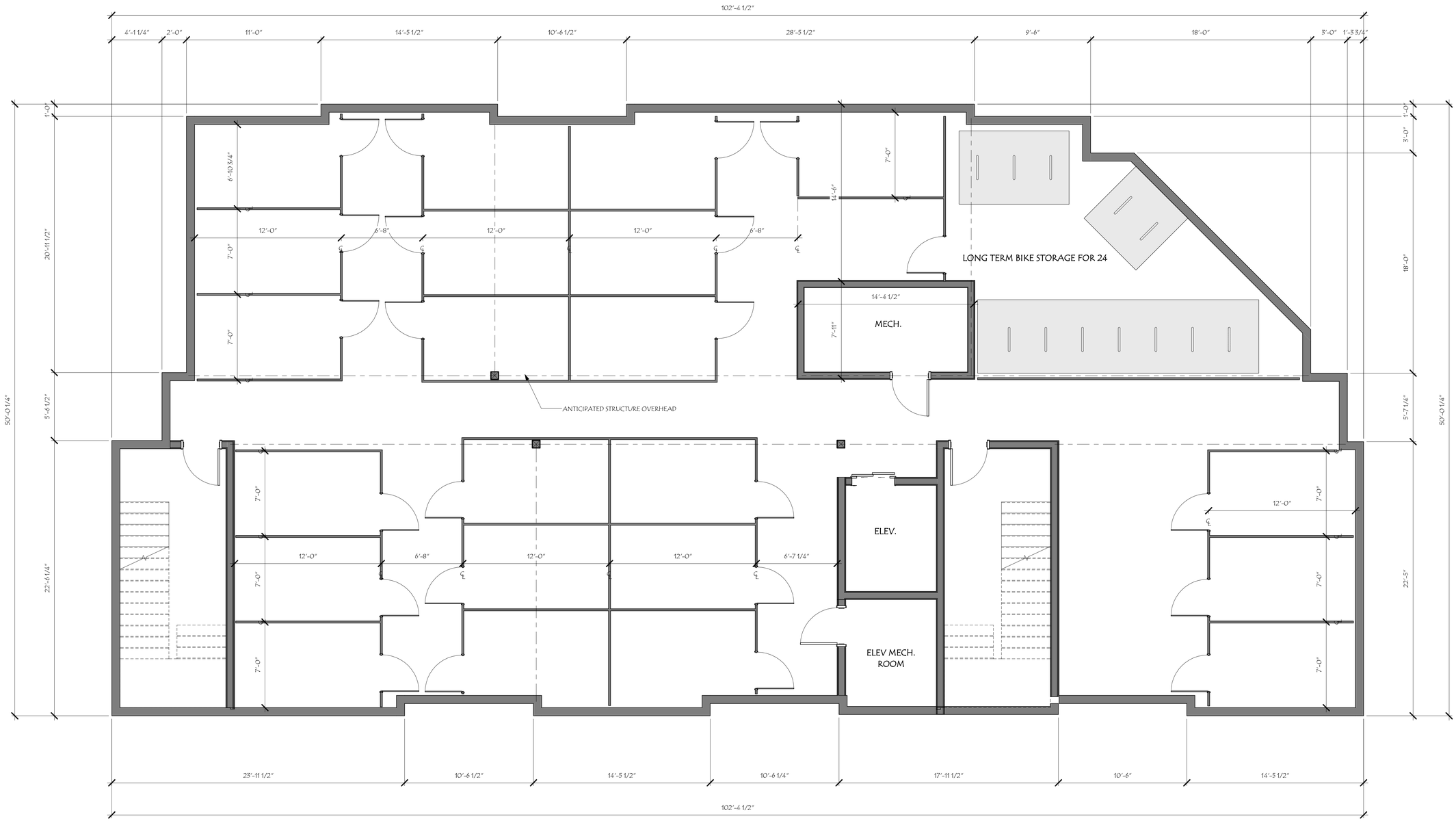
Present Use/Occupancy: No. of Dwelling Units:
Retail, Service, Restaurant

Uses and their gross square feet:
1-Story 5,016 SF

Proposed Use/Occupancy: No. of Dwelling Units:
Mixed-Use, 22 Apartment Units & 700 SF Retail

Uses and their gross square feet:
4-Story Mixed-Use 18,009 GSF

	Present Conditions	Proposed Conditions	Min. or Max. Required by Zoning for Proposed Use
Lot Size	14,381 SF	14,381 SF	min. ----
Frontage	208 FT	208 FT	min. ----
Floor Area Ratio	0.35	1.25	max. 1.5
Lot Coverage (%), where applicable	34.9%	32.6%	max. ----
Lot Area per Dwelling Unit (square feet)	N/A	654 SF	min. ----
Front Yard Depth (feet)	0 FT		min. ----
Side Yard Width (feet) right side	53.6 FT	65.3 FT	min. ----
left side	1.3 FT	1.9 FT	min. ----
Rear Yard Depth (feet)	N/A	N/A	min. N/A
Height	----	-----	min. -----
Stories	1-STORY	4-STORY	stories 4-STORY
Feet	13.5 FT	39 FT	feet 50 FT
Open Space (% of G.F.A.)	-----	-----	min. -----
Landscaped (square feet)	0 SF	1,470 SF(10.2%)	(s.f.) 1,438 SF (10%)
Usable (square feet)		1,707 SF(11.9%)	(s.f.) 2,876 SF (20%)
Parking Spaces (No.)	UNKNOWN	25 SPACES	min. 25 SPACES
Parking Area Setbacks (feet), where applicable	0 FT	1 FT	min. 5 FT
Loading Spaces (No.)	N/A	N/A	min. N/A
Type of Construction	NEW CONSTRUCTION		
Distance to Nearest Building	12.1 FT	16.3 FT	min.



1 BASEMENT
1/4" = 1'-0"

MARKET SQUARE ARCHITECTS
104 Congress St., STE 205
Portsmouth, NH 03801
PH: 603-334-0202

NOT FOR CONSTRUCTION

ARLINGTON MIXED USE

892 MASS AVE
ARLINGTON, MA

Revisions:
Description Date

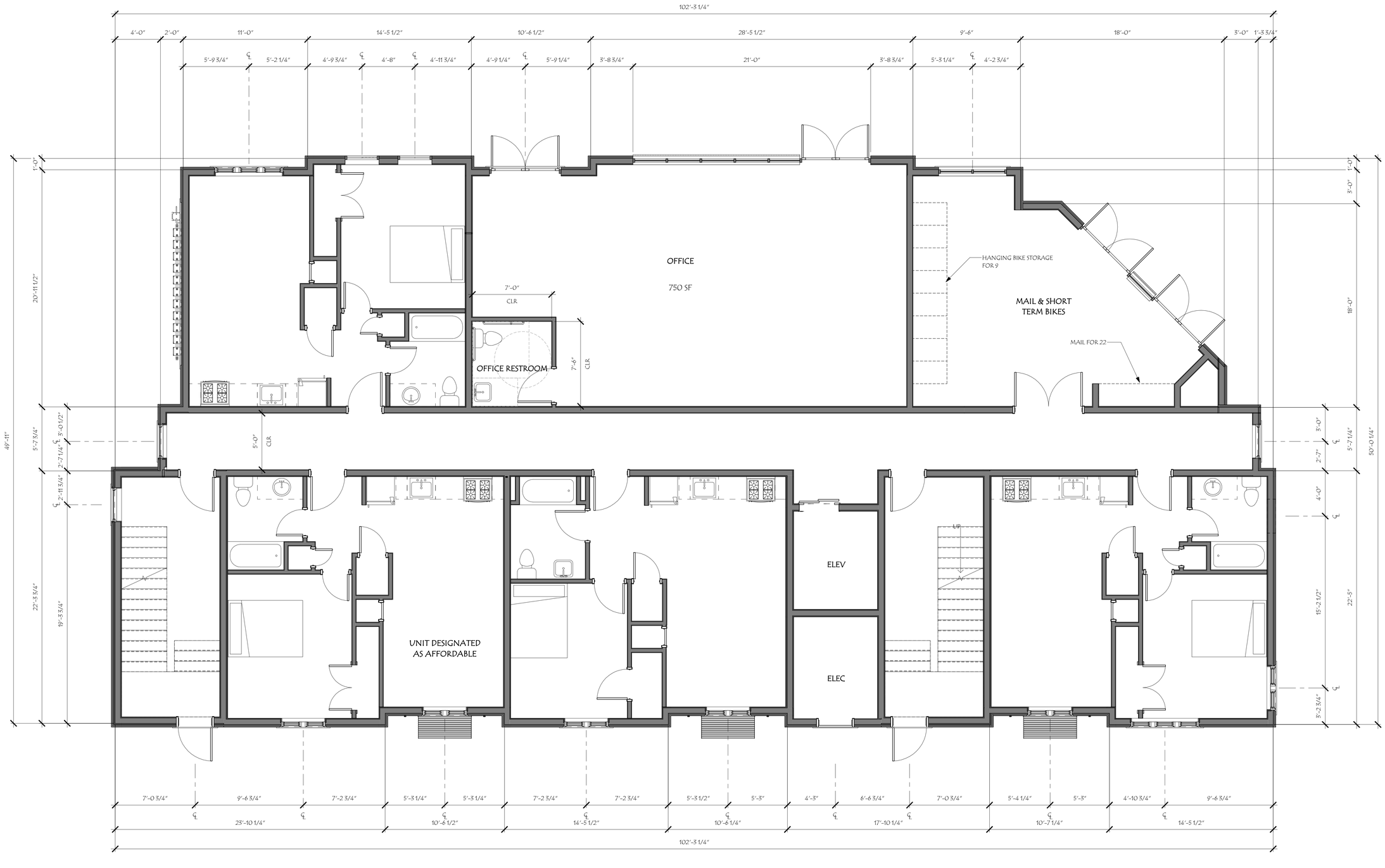
Scale: 1/4" = 1'-0"
Drawn By: PPS
Checked By: ALW
Project No.: 2020004
Date: 04/03/20

Title: BASEMENT FLOOR PLAN

A1.00

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3/27/2020 3:32:27 PM

NOTE:
SEE CIVIL FOR SITE INFORMATION.



1 1ST FLOOR
1/4" = 1'-0"

MARKET SQUARE ARCHITECTS
104 Congress St., STE 205
Portsmouth, NH 03801
PH: 603-501-0202

NOT FOR CONSTRUCTION

ARLINGTON MIXED USE

892 MASS AVE
ARLINGTON, MA

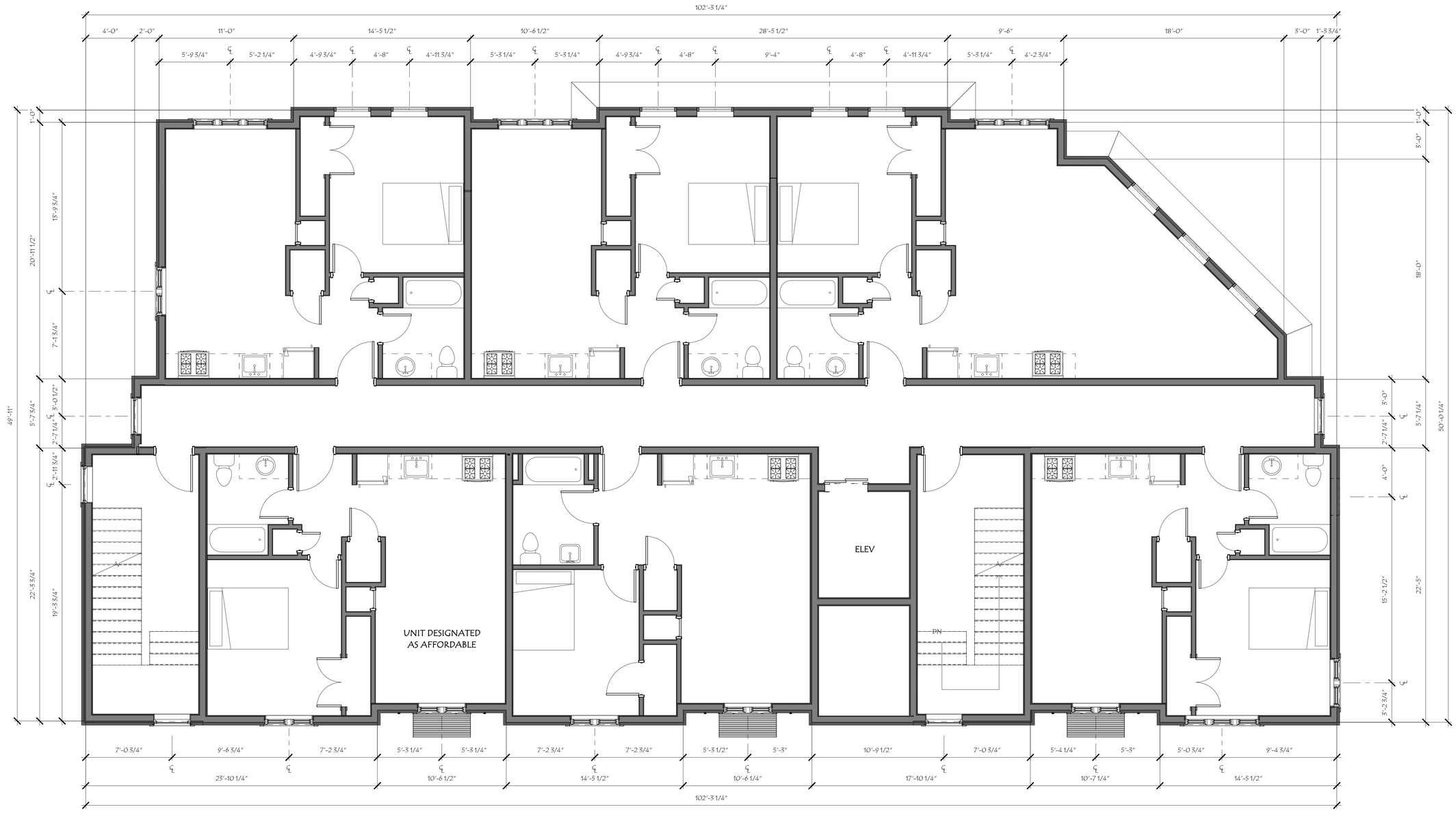
Revisions:
Description Date

Scale: 1/4" = 1'-0"
Drawn By: PPS
Checked By: ALW
Project No.: 2020004
Date: 04/03/20

Title: FIRST FLOOR PLAN

A1.01

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3/27/2020 3:32:30 PM



1 2ND AND 3RD FLOORS
1/4" = 1'-0"

MARKET SQUARE ARCHITECTS
104 Congress St., STE 205
Portsmouth, NH 03801
PH: 603-430-0202

NOT FOR CONSTRUCTION

ARLINGTON MIXED USE

892 MASS AVE
ARLINGTON, MA

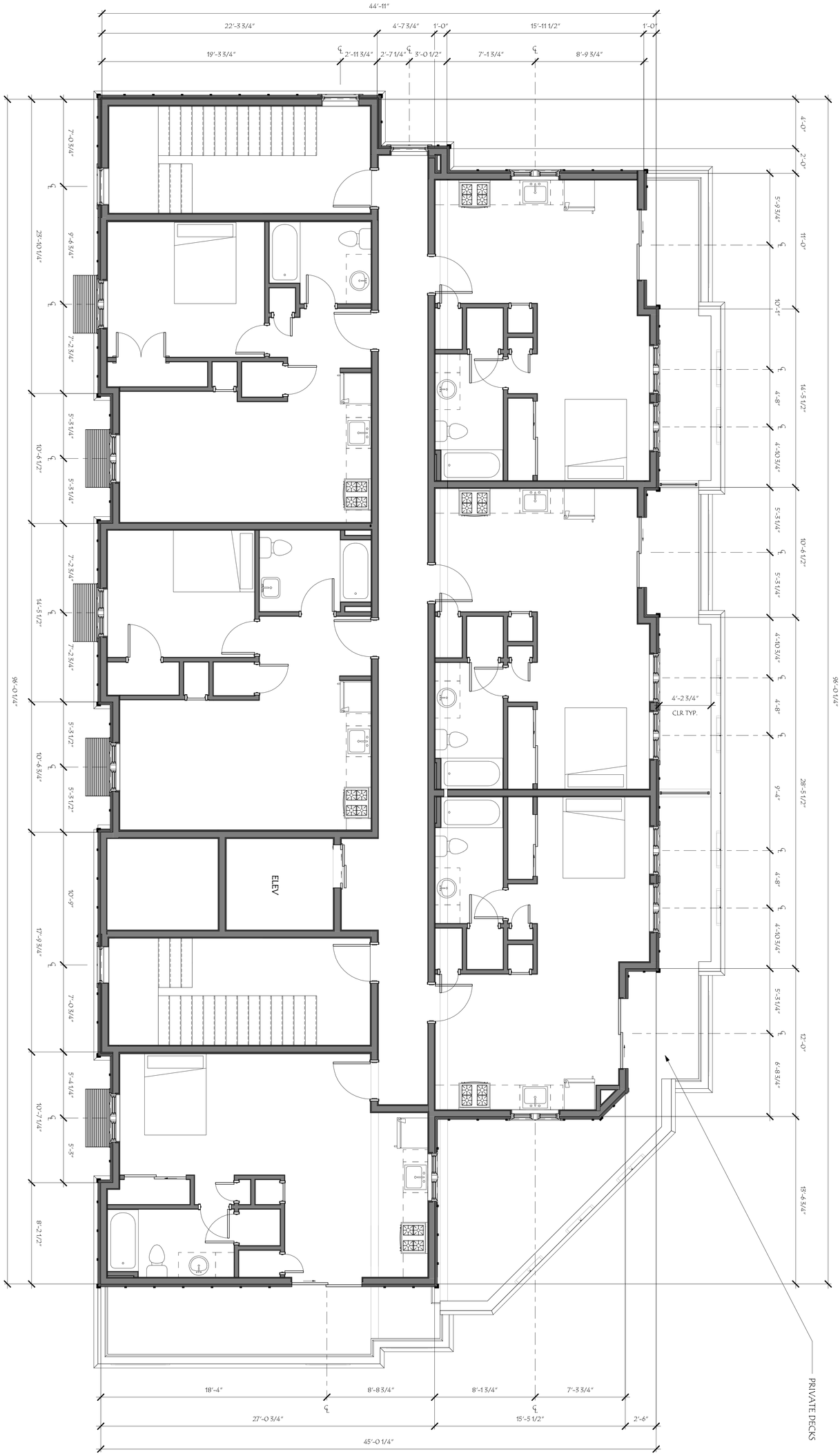
Revisions:
Description Date

Scale: 1/4" = 1'-0"
Drawn By: PPS
Checked By: ALW
Project No.: 2020004
Date: 04/03/20

Title: SECOND AND THIRD FLOOR PLAN

A1.02

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3/27/2020 3:32:31 PM



4TH FLOOR
1/4" = 1'-0"

171 of 289

Title: FOURTH FLOOR PLAN	Scale:	1/4" = 1'-0"	Revisions: # Description Date
	Drawn By:	PPS	
	Checked By:	ALW	
A1.03	Project No.:	2020004	
	Date:	04/03/20	

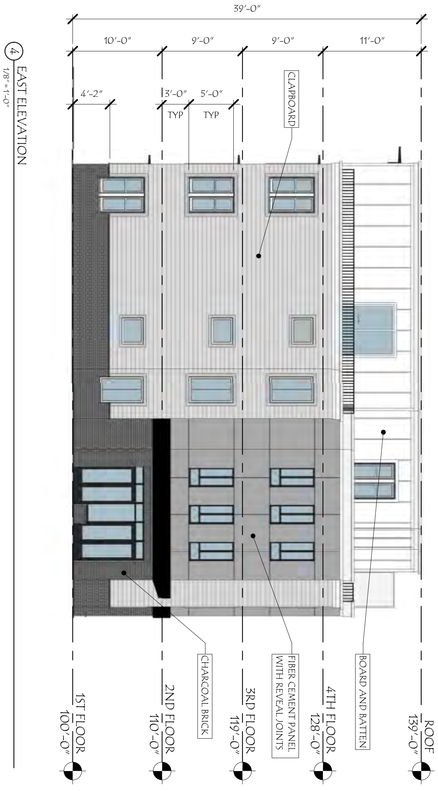
ARLINGTON MIXED USE

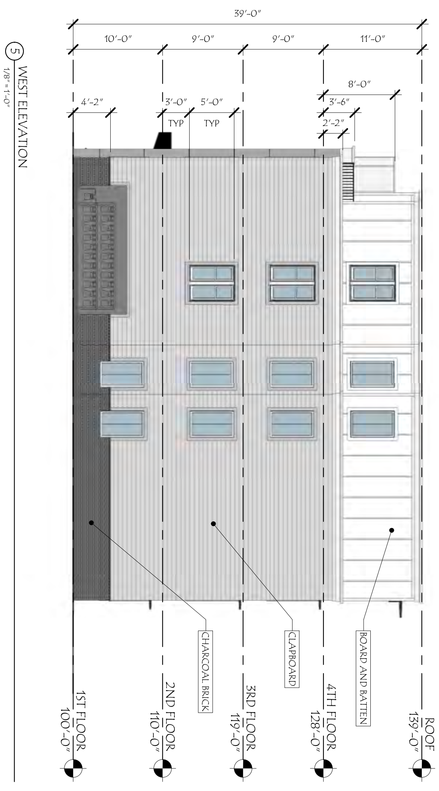
892 MASS AVE
ARLINGTON, MA

NOT FOR CONSTRUCTION

MARKET SQUARE ARCHITECTS
104 Congress St., STE 203
Portsmouth, NH 03801
PH: 603.501.0202

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Title: BUILDING ELEVATIONS	Scale:	1/8" = 1'-0"	Revisions: # Description Date
	Drawn By:	PPS	
	Checked By:	ALW	
A2.00	Project No.:	2020004	
	Date:	04/03/20	

ARLINGTON MIXED USE

892 MASS AVE
ARLINGTON, MA

NOT FOR CONSTRUCTION

MARKET SQUARE ARCHITECTS
104 Congress St., STE 203
Portsmouth, NH 03801
PH: 603.501.0202

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Title:
3D RENDER- MASS AVE

A9.00

Scale:

Drawn By: PPS

Checked By: ALW

Project No.: 2020004

Date: 04/03/20

Revisions:

#	Description	Date

ARLINGTON MIXED USE

892 MASS AVE
ARLINGTON, MA

NOT FOR CONSTRUCTION

MARKET SQUARE ARCHITECTS
104 Congress St., STE 203
Portsmouth, NH 03801
PH: 603.501.0202

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MARKET SQUARE ARCHITECTS
104 Congress St., STE 205
Portsmouth, NH 03801
PH: 603.501.0202

NOT FOR CONSTRUCTION

ARLINGTON MIXED USE

892 MASS AVE
ARLINGTON, MA

Revisions:

#	Description	Date

Scale:
Drawn By: PPS
Checked By: ALW
Project No.: 2020004
Date: 04/05/20

Title:
3D RENDER - LOCKELAND

A9.01

2019 Market Square Architects
3/27/2020 3:52:40 PM

GREATER METROPOLITAN
• REAL ESTATE •

To whom it may concern,

I have had experience in the rental market in Arlington over the last 8 plus years. I currently have many exclusive landlords that I work with in Arlington and about 60 plus units. The studio and one bedroom units are always the most sought after and always move fairly quickly. Two bedroom units will rent but do take longer. Professional couple wanting a home office or two professional roommates is the most common client for a 2 bed especially in a building and they are willing to pay the high end price. The new and modern two bedroom rentals in a building are usually high end and priced high so this does not attract families. Also on Mass Ave with a bike path and bus line most of my clients are young professionals and not families. I do have some families but mainly looking for a multi family or single family with a yard and neighborhood where you get more or your money. Hope this helps with your research and rental in the Mass Ave Arlington area.

Thanks,

Kristine Welch

Greater Metropolitan Real Estate

872 Main St Winchester, Ma 01890

LEED v4 for Building Design and Construction: Homes and Multifamily Lowrise

Project Checklist

Project Name: 882-892 Massachusetts Ave, Arlington, MA 02476
Date: 3/26/2020

Y	?	N			
Y			Credit	Integrative Process	2

Y	?	N			
8	5	0	**Location and Transportation**		15
Y			Prereq	Floodplain Avoidance	Required
			PERFORMANCE PATH		
			Credit	LEED for Neighborhood Development Location	15
			PRESCRIPTIVE PATH		
4	3		Credit	Site Selection	8
2			Credit	Compact Development	3
	2		Credit	Community Resources	2
2			Credit	Access to Transit	2

Y	?	N			
2	2	0	**Sustainable Sites**		7
Y			Prereq	Construction Activity Pollution Prevention	Required
Y			Prereq	No Invasive Plants	Required
	1		Credit	Heat Island Reduction	2
	1		Credit	Rainwater Management	3
2			Credit	Non-Toxic Pest Control	2

Y	?	N			
4	1	0	**Water Efficiency**		12
Y			Prereq	Water Metering	Required
			PERFORMANCE PATH		
			Credit	Total Water Use	12
			PRESCRIPTIVE PATH		
4			Credit	Indoor Water Use	6
	1		Credit	Outdoor Water Use	4

Y	?	N			
15	12	0	**Energy and Atmosphere**		38
Y			Prereq	Minimum Energy Performance	Required
Y			Prereq	Energy Metering	Required
Y			Prereq	Education of the Homeowner, Tenant or Building Manager	Required
			PERFORMANCE PATH		
			Credit	Annual Energy Use	29
			BOTH PATHS		
2	3		Credit	Efficient Hot Water Distribution System	5
			Credit	Advanced Utility Tracking	2
1			Credit	Active Solar Ready Design	1
	1		Credit	HVAC Start-Up Credentialing	1
			PRESCRIPTIVE PATH		
Y			Prereq	Home Size	Required
			Credit	Building Orientation for Passive Solar	3
2			Credit	Air Infiltration	2
	1		Credit	Envelope Insulation	2
3			Credit	Windows	3
			Credit	Space Heating & Cooling Equipment	4

Y	?	N			
			EA PRESCRIPTIVE PATH (continued)		
	3		Credit	Heating & Cooling Distribution Systems	3
	3		Credit	Efficient Domestic Hot Water Equipment	3
2			Credit	Lighting	2
2			Credit	High Efficiency Appliances	2
3	1		Credit	Renewable Energy	4

Y	?	N			
6	2	0	**Materials and Resources**		10
Y			Prereq	Certified Tropical Wood	Required
Y			Prereq	Durability Management	Required
	1		Credit	Durability Management Verification	1
3	1		Credit	Environmentally Preferable Products	4
3			Credit	Construction Waste Management	3
			Credit	Material Efficient Framing	2

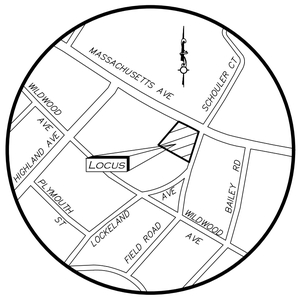
Y	?	N			
7	2	0	**Indoor Environmental Quality**		16
Y			Prereq	Ventilation	Required
Y			Prereq	Combustion Venting	Required
Y			Prereq	Garage Pollutant Protection	Required
Y			Prereq	Radon-Resistant Construction	Required
Y			Prereq	Air FIltering	Required
Y			Prereq	Environmental Tobacco Smoke	Required
Y			Prereq	Compartmentalization	Required
1			Credit	Enhanced Ventilation	3
2			Credit	Contaminant Control	2
	2		Credit	Balancing of Heating and Cooling Distribution Systems	3
1			Credit	Enhanced Compartmentalization	1
			Credit	Enhanced Combustion Venting	2
			Credit	Enhanced Garage Pollutant Protection	2
3			Credit	Low Emitting Products	3

Y	?	N			
0	2	0	**Innovation**		6
Y			Prereq	Preliminary Rating	Required
	1		Credit	Innovation	5
	1		Credit	LEED AP Homes	1

Y	?	N			
0	0	0	**Regional Priority**		4
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1
			Credit	Regional Priority: Specific Credit	1

42	26	0	**TOTALS**	Possible Points:	**110**

Certified: 40 to 49 points, **Silver:** 50 to 59 points, **Gold:** 60 to 79 points, **Platinum:** 80 to 110



LOCUS MAP
NOT TO SCALE

SITE DEVELOPMENT PLAN SET

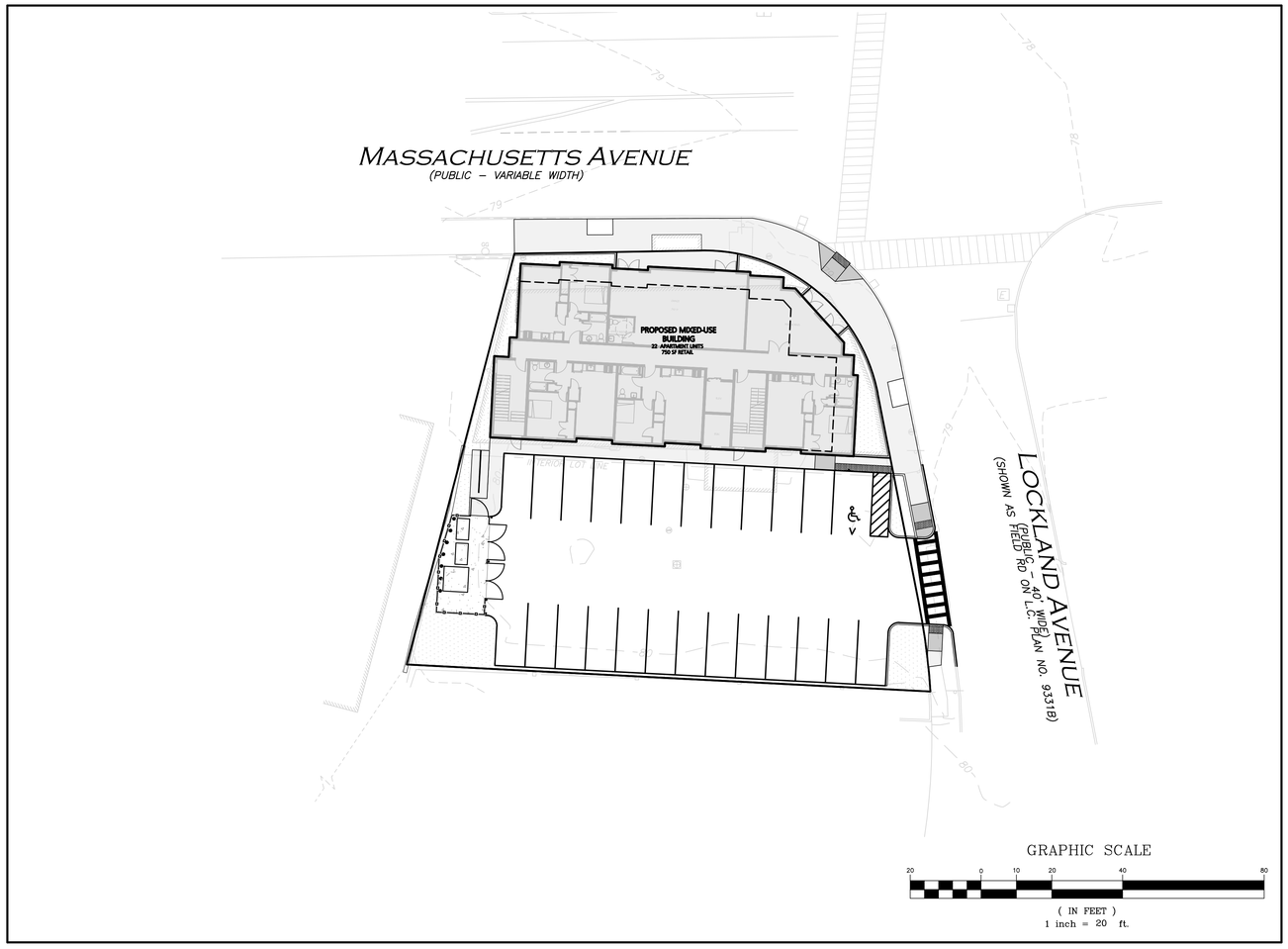
882-892 MASSACHUSETTS AVE

ARLINGTON, MA 02476

APPLICANT:
882-892 MASSACHUSETTS AVE, LLC
452 MASSACHUSETTS AVE, STE 1
ARLINGTON, MA 02474

ARCHITECT:
MARKET SQUARE ARCHITECTS
104 CONGRESS STREET, STE 203
PORTSMOUTH, NH 03801
(603) 501-0202

CIVIL ENGINEER, LANDSCAPE ARCHITECT & LAND SURVEYOR:
ALLEN & MAJOR ASSOCIATES, INC.
100 COMMERCE WAY, SUITE 5
WOBURN, MA 01801
(781) 985-6889



LIST OF DRAWINGS

DRAWING TITLE	SHEET	ISSUED	REVISED
EXISTING CONDITIONS	V-101	4/10/2020	-
SITE PREPARATION PLAN	C-101	4/10/2020	-
LAYOUT & MATERIALS PLAN	C-102	4/10/2020	-
GRADING & DRAINAGE PLAN	C-103	4/10/2020	-
UTILITIES PLAN	C-104	4/10/2020	-
DETAILS	C-501	4/10/2020	-
DETAILS	C-502	4/10/2020	-
DETAILS	C-503	4/10/2020	-
LANDSCAPE PLAN	L-101	4/10/2020	-
LANDSCAPE DETAILS	L-501	4/10/2020	-



PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
100 COMMERCE WAY, SUITE 5
WOBURN MA 01801
TEL: (781) 935-6889
FAX: (781) 935-2896

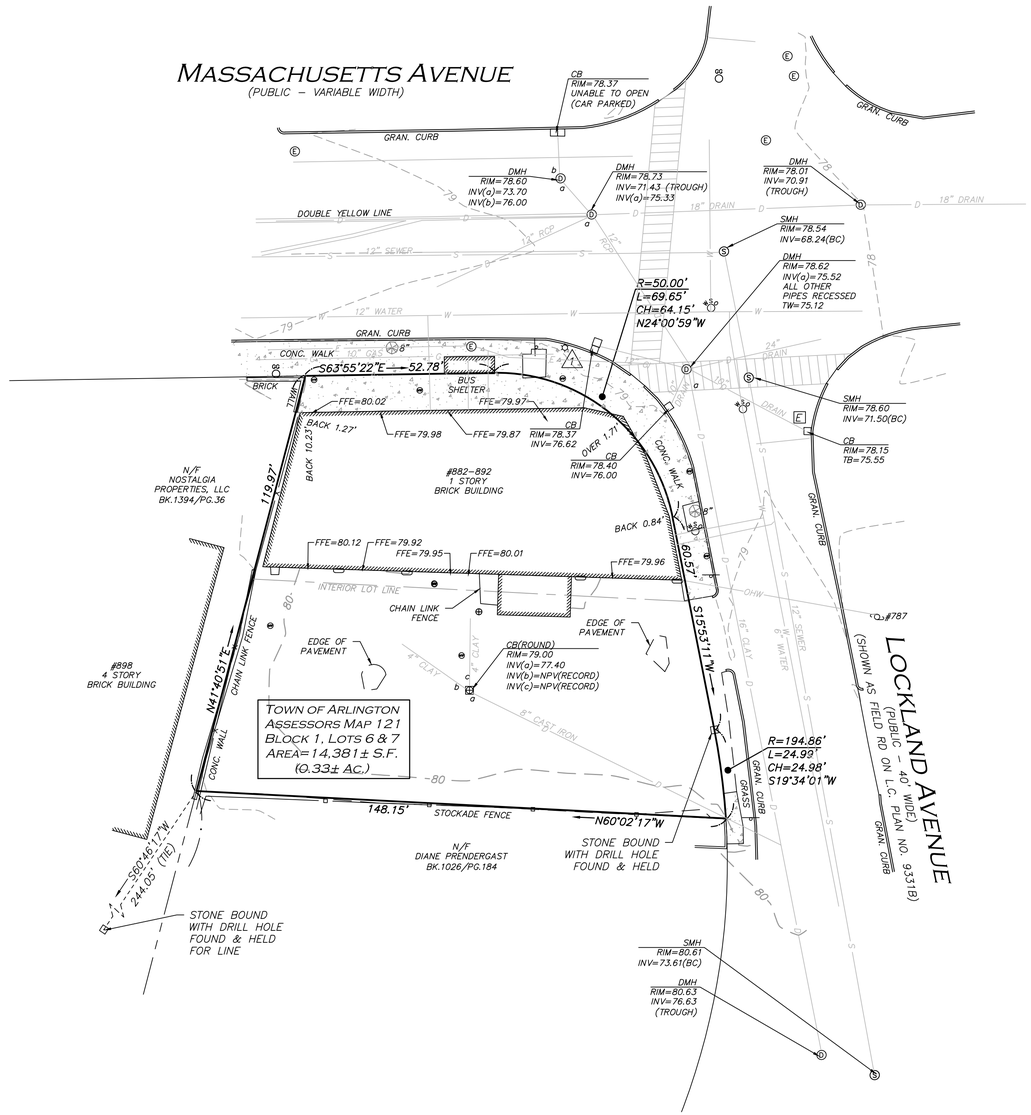
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

ISSUED FOR ARB REVIEW: 4/10/2020

R:\PROJECTS\2729-01\CIVIL\DRAWINGS\CURRENT\C-2729-01_COVER.DWG



LOCUS MAP
(NOT TO SCALE)



LEGEND

STONE BOUND (SB)	⌞⌟
DRAIN MANHOLE (DMH)	Ⓓ
SEWER MANHOLE (SMH)	Ⓢ
ELECTRIC MANHOLE (EMH)	Ⓔ
MISC. MANHOLE (MH)	Ⓜ
TELEPHONE MANHOLE (TMH)	Ⓣ
CATCH BASIN (CB)	□
ROUND CATCH BASIN (RCB)	⊞
MONITOR WELL	MW
DOWNSPOUT	▭
WATER GATE	
GAS GATE	
BOLLARD	⊕
TREE	
CONCRETE	
BUILDING	
1' CONTOUR	53
5' CONTOUR	55
PROPERTY LINE	
ABUTTERS LINE	
EDGE OF PAVEMENT	
CURB	
CHAIN LINK FENCE	x
STOCKADE FENCE	
WATER LINE	W
SEWER LINE	S
DRAIN LINE	D
GAS LINE	G
ELECTRIC LINE	E
TELEPHONE LINE	T
FINISHED FLOOR ELEVATION	FFE
BITUMINOUS	BIT.
CONCRETE	CONC.
GRANITE	GRAN.
NOW OR FORMERLY	N/F
BOOK	BK.
PAGE	PG.
CERTIFICATE OF TITLE	COT
LAND COURT	L.C.
LAND COURT CASE	L.C.C.

LOCUS REFERENCES

- TOWN OF ARLINGTON ASSESSORS MAP 26, BLOCK 1, LOTS 6 & 7.
- RECORD OWNER: 882–892 MASSACHUSETTS AVENUE, LLC
- L.C. BOOK 1523, PAGE 101
- L.C.C. #9331E

PLAN REFERENCES

- L.C.C. 9331B
- L.C.C. 13975B

NOTES

1. NORTH ARROW IS BASED ON MASSACHUSETTS GRID COORDINATE SYSTEM (MAINLAND ZONE) (NAD 83).
2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM MIDDLESEX (SOUTH) REGISTRY OF DEEDS IN CAMBRIDGE, MA.
3. VERTICAL DATUM IS NAVD 88 ESTABLISHED USING RTK GPS OBSERVATION.
4. CONTOUR INTERVAL IS ONE FOOT (1').
5. THERE WERE NO STRIPED PARKING SPACES OBSERVED ON SITE AT THE TIME OF SURVEY.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

UTILITY STATEMENT

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. ALLEN & MAJOR ASSOCIATES, INC. (A&M) MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. A&M FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. A&M HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

BENCHMARK SUMMARY

TBM #	DESCRIPTION	ELEV.
1	CHISEL SQUARE ON LIGHT POLE BASE	79.15

N:\PROJECTS\2729-01\SURVEY\DRAWINGS\CURRENT\S-2729-01-EC.DWG
FB# ???? PG. ???

WE HEREBY CERTIFY THAT THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON DECEMBER 12, 2019.

04/10/20

PROFESSIONAL LAND SURVEYOR FOR
ALLEN & MAJOR ASSOCIATES, INC.

COMMONWEALTH OF MASSACHUSETTS
NORMAN I. LIPSITZ
No. 28446
PROFESSIONAL LAND SURVEYOR

APR 10, 2020

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
FRANK PASCIUTO
455 MASSACHUSETTS AVENUE, STE 1
ARLINGTON, MA 02474

PROJECT:
892 MASSACHUSETTS AVENUE
ARLINGTON, MA

PROJECT NO.	2729-01	DATE:	01/14/20
SCALE:	1" = 20'	DWG. NAME:	S-2729-01-EC
DRAFTED BY:	AJR	CHECKED BY:	NIL

PREPARED BY:

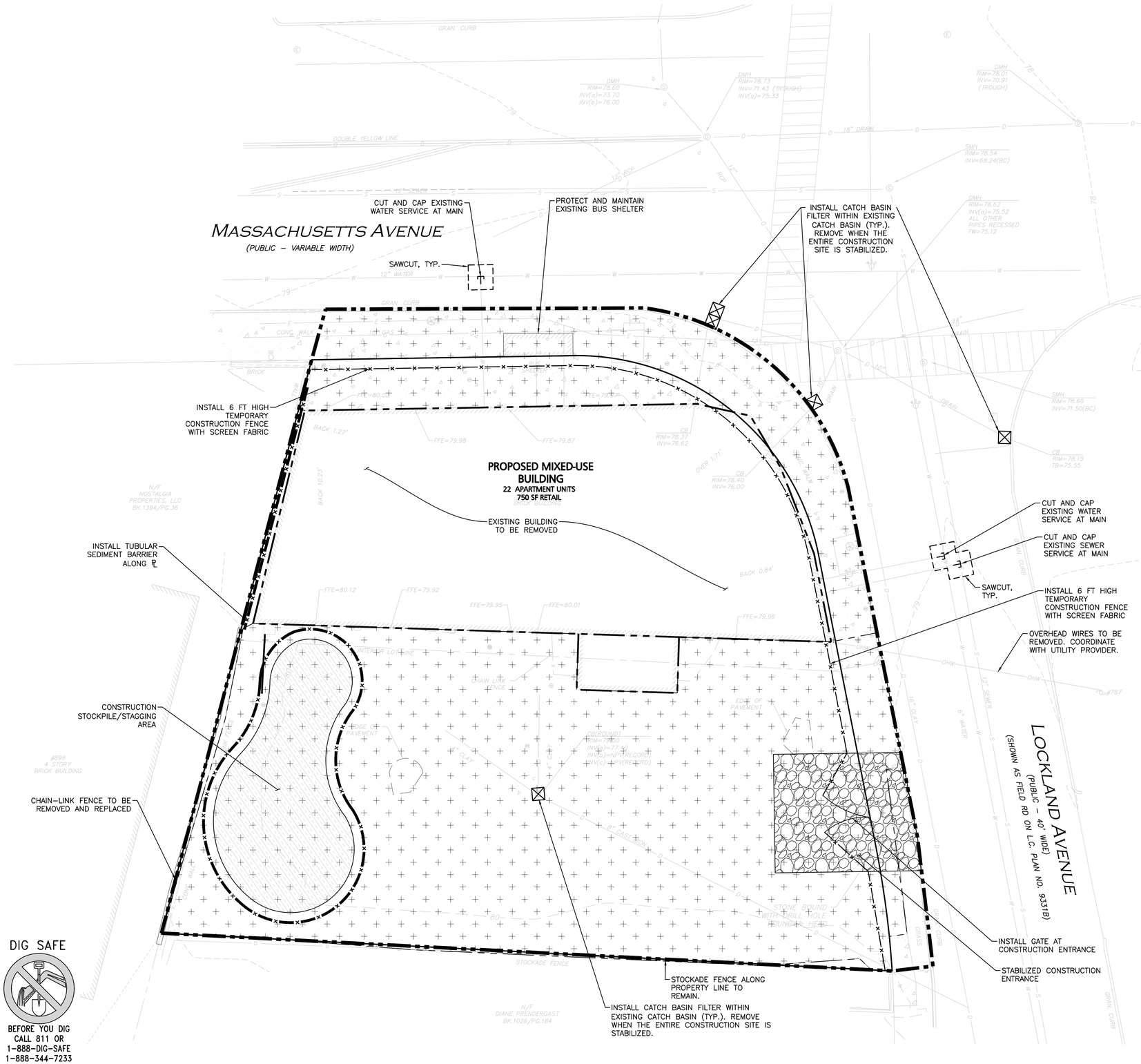
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www.allenmajor.com
100 COMMERCE WAY, SUITE 5
WOBURN MA 01801-8501
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FAX: (781) 935-2896
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:
EXISTING CONDITIONS

SHEET No.
V-101

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LEGEND

TUBULAR BARRIER	
CATCH BASIN FILTER	
STABILIZED ENTRANCE	
STOCKPILE/STAGING AREA	
LIMIT OF DISTURBANCE	
LIMIT OF 'CLEAR AND GRUB'	
BUILDING TO BE REMOVED	
PAVEMENT TO BE REMOVED	
UTILITY CUT AND CAP	
TEMPORARY FENCE	

SITE PREPARATION NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. ALTHOUGH CERTAIN ITEMS HAVE BEEN NOTED ON THIS DRAWING FOR DEMOLITION, NO ATTEMPT HAS BEEN MADE TO DELINEATE EACH AND EVERY ITEM THAT REQUIRES DEMOLITION FOR THE COMPLETION OF THE PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL NECESSARY DEMOLITION WORK TO COMPLETE THE PROJECT. ALLEN & MAJOR ASSOCIATES, INC. IS NOT RESPONSIBLE FOR SITE DEMOLITION ITEMS NOT SHOWN ON THE SURVEY, OR SPECIFICALLY NOTED. THE DEMOLITION NOTES AND ARROWS ON THIS PLAN ARE TYPICAL AND DO NOT REFLECT QUANTITY.
4. EXISTING WATER AND SEWER CONNECTIONS SHALL BE CUT AND CAPPED IN ACCORDANCE WITH THE TOWN OF ARLINGTON REQUIREMENTS.
5. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.
6. ALL INSTALLED CATCH BASINS AND AREA DRAINS SHALL HAVE A FILTER INSTALLED IMMEDIATELY, AND THE FILTER SHALL BE REMOVED WHEN THE ENTIRE SITE IS STABILIZED.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

R:\PROJECTS\2729-01\CIVIL\DRAWINGS\CURRENT\C-2729-01_SITE-PREP.DWG

COMMONWEALTH OF MASSACHUSETTS
BRIAN J. DOSES
CIVIL
NO. 49212
REGISTERED
PROFESSIONAL ENGINEER
04.10.20

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:

882-892 MASSACHUSETTS AVE, LLC
452 MASSACHUSETTS AVE, STE 1
ARLINGTON, MA 02474

PROJECT:

892 MASSACHUSETTS AVE
ARLINGTON, MA 02476

PROJECT NO.	2729-01	DATE:	04-10-20
SCALE:	1" = 10'	DWG. NAME:	C2729-01
DESIGNED BY:	ARM	CHECKED BY:	BDJ/RC

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
100 COMMERCE WAY, SUITE 5
WOBURN MA 01801
TEL: (781) 935-6889
FAX: (781) 935-2896
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:

SITE PREPARATION PLAN

SHEET No.

C-101

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ZONING SUMMARY TABLE
B2-NEIGHBORHOOD BUSINESS (MIXED-USE <=20,000SF)

ITEM	REQUIRED/ ALLOWED	EXISTING	PROPOSED
MINIMUM LOT AREA	----	14,380± SF	14,380± SF
MINIMUM LOT AREA PER UNIT	----	N/A	575± SF
MINIMUM FRONTAGE	50 FT	208± FT	208± FT
MINIMUM FRONT YARD SETBACK	----	0 FT	1.9 FT
MINIMUM SIDE YARD SETBACK	----	1.3 FT	1.9 FT
MINIMUM REAR YARD SETBACK	N/A	N/A	N/A
LANDSCAPED OPEN SPACE	10%	0%	10.2%
USABLE OPEN SPACE	20%	5.3%	11.9%(2)
MAXIMUM HEIGHT	50 FT	13.5± FT	39 FT
MAXIMUM HEIGHT STORIES	4(1)	1	4
FLOOR AREA RATIO	1.50	0.35	1.25

ZONING TABLE NOTES:
1. SECTION 5.3.17. FOR BUILDING MORE THAN 3 STORIES IN HEIGHT, AN ADDITIONAL 7.5 FT STEP-BACK SHALL BE PROVIDED BEGINNING AT THE THIRD STORY LEVEL OR 30 FT ABOVE GRADE, WHICHEVER IS LESS. THE UPPER STORY STEP-BACK SHALL BE PROVIDED ALONG ALL BUILDING ELEVATIONS WITH STREET FRONTAGE.
2. SECTION 5.3.21. SUPPLEMENTAL REQUIREMENTS IN THE BUSINESS AND INDUSTRIAL DISTRICTS, D. FOR MIXED USES AND ANY PERMITTED RESIDENTIAL USE NOT SPECIFICALLY IDENTIFIED IN THE TABLES IN SECTION 5.5.2, THE MINIMUM OPEN SPACE REQUIREMENTS (COMPUTED FROM THE RESIDENTIAL FLOOR AREA ONLY) SHALL BE 10% LANDSCAPED AND 20% USABLE IN THE B1, B2, B2A, B3, AND B4 DISTRICTS, AND 15 PERCENT USABLE IN THE B5 DISTRICT. A WAIVER MAY BE REQUIRED FROM THE USABLE OPEN SPACE REQUIREMENT.

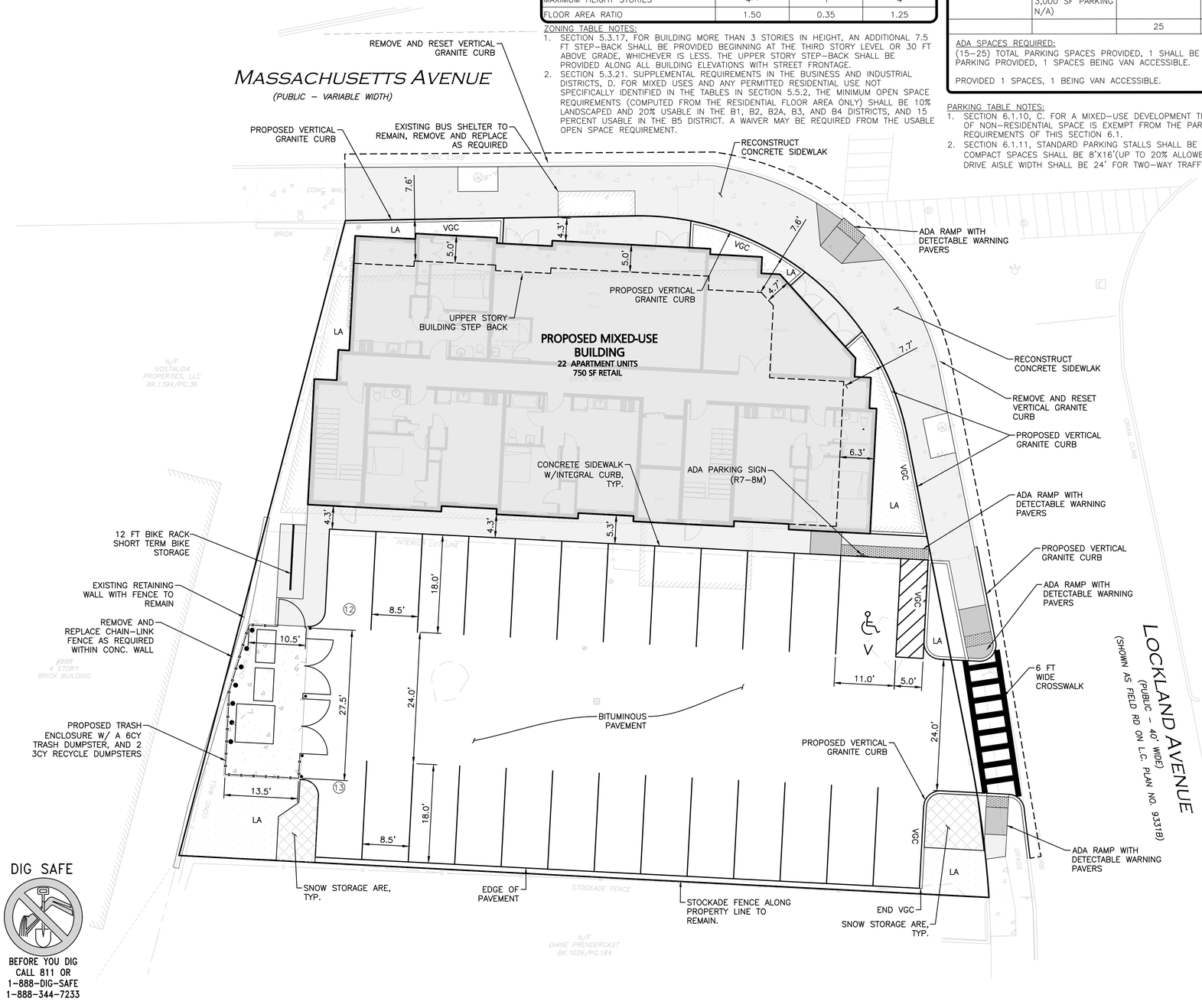
PARKING SUMMARY TABLE

USE	CALCULATION	MIN. REQUIRED	TOTAL PROPOSED
APARTMENT BUILDING	1.15 SPACES PER 1 BED UNIT	21	21
	18 X 1.15 = 21 REQUIRED		
	1 SPACE PER EFFICIENCY UNIT	4	4
	4 X 1 = 4 REQUIRED		
GENERAL RETAIL	1 PER 300 SF	N/A	N/A
	729 SF (UNDER 3,000 SF PARKING N/A)		
		25	25

ADA SPACES REQUIRED:
(15-25) TOTAL PARKING SPACES PROVIDED, 1 SHALL BE THE MINIMUM ADA PARKING PROVIDED, 1 SPACES BEING VAN ACCESSIBLE.

PROVIDED 1 SPACES, 1 BEING VAN ACCESSIBLE.

PARKING TABLE NOTES:
1. SECTION 6.1.10, C. FOR A MIXED-USE DEVELOPMENT THE FIRST 3,000 SF OF NON-RESIDENTIAL SPACE IS EXEMPT FROM THE PARKING REQUIREMENTS OF THIS SECTION 6.1.
2. SECTION 6.1.11, STANDARD PARKING STALLS SHALL BE 8.5'X18', AND COMPACT SPACES SHALL BE 8'X16'(UP TO 20% ALLOWED WITH S.P.). DRIVE AISLE WIDTH SHALL BE 24' FOR TWO-WAY TRAFFIC.



LEGEND

PROP. PROPERTY LINE
SIGN
BOLLARD
BUILDING
BUILDING ARCHITECTURE
BUILDING INTERIOR WALLS
CURB
RETAINING WALL
PARKING STRIPING
ROADWAY STRIPING
SIDEWALK
ADA ACCESSIBLE RAMP
ADA DET. WARNING SURFACE
SNOW STORAGE
SETBACK LINE
BASELINE
SAW-CUT LINE
PARKING COUNT
COMPACT PARKING STALL
CHAIN LINK FENCE
WOOD FENCE

NOTES
1. WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS OR CONDITIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR. ALL SITE ITEMS SHALL BE LAID OUT AND AS BUILT BY A LICENSED LAND SURVEYOR.
2. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.

GRAPHIC SCALE
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04.10.20
COMMONWEALTH OF MASSACHUSETTS
BRIAN D. JONES
CIVIL
No. 49212
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
882-892 MASSACHUSETTS AVE, LLC
452 MASSACHUSETTS AVE, STE 1
ARLINGTON, MA 02474

PROJECT:
892 MASSACHUSETTS AVE
ARLINGTON, MA 02476

PROJECT NO.	2729-01	DATE:	04-10-20
SCALE:	1" = 10'	DWG. NAME:	C2729-01
DESIGNED BY:	ARM	CHECKED BY:	BDJ/RC

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
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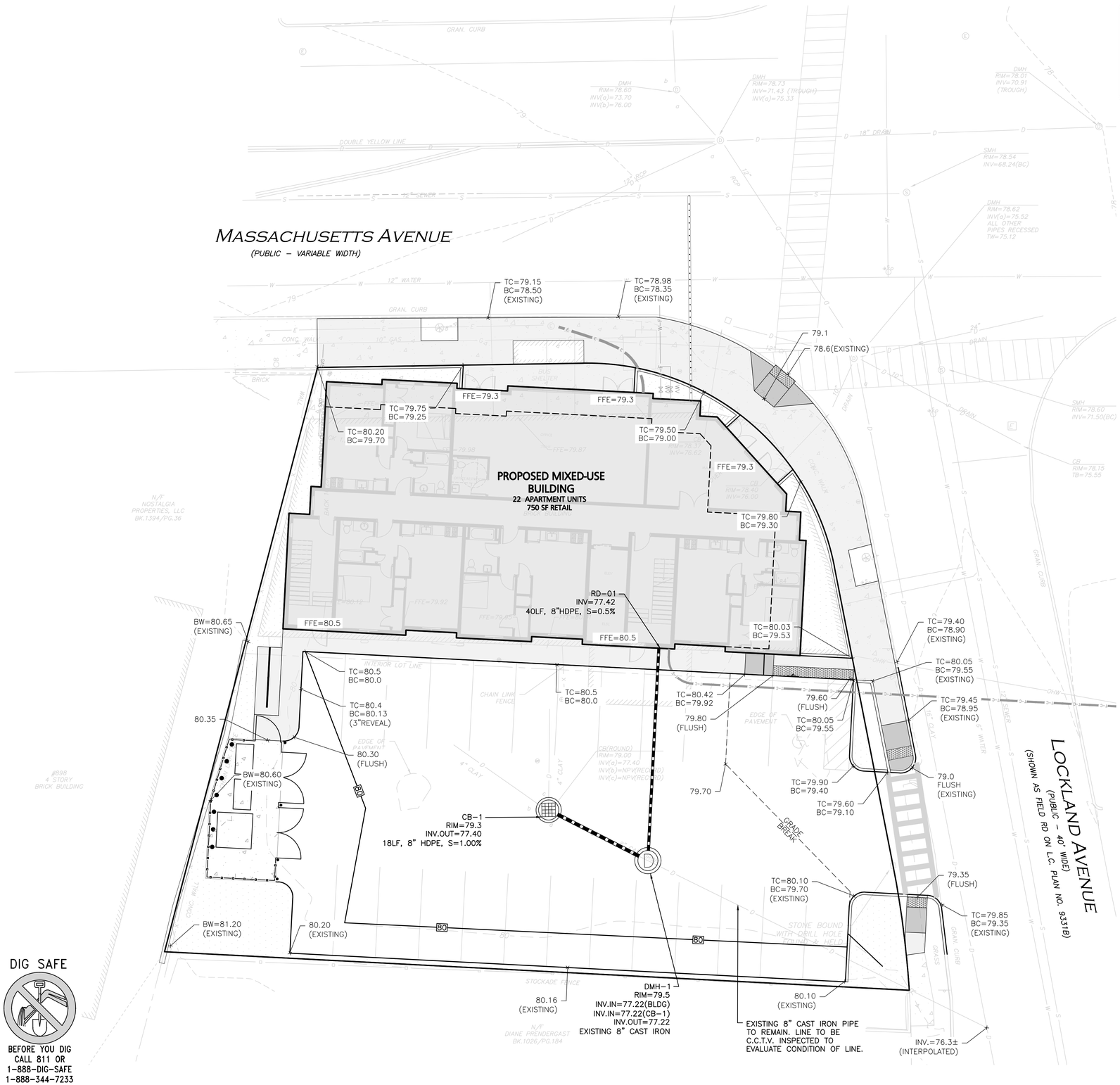
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DRAWING TITLE:
LAYOUT & MATERIALS PLAN

SHEET No.
C-102

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LEGEND

DRAIN MANHOLE	
CATCH BASIN	
DRAIN LINE	
10' CONTOUR	100
2' CONTOUR	102
SPOT GRADE	79.50

PLAN NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR IT'S REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITY CONNECTIONS SHOULD BE COORDINATED WITH THE MEP PRIOR TO CONSTRUCTION.
3. EXISTING DRAINAGE STRUCTURES TO REMAIN ARE TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
4. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
5. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ENSURE A SMOOTH FIT AND CONTINUOUS GRADE.
6. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
7. THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT FOR THE FINAL LOCATIONS OF PROPOSED ROOF DRAINS. LOCATIONS ARE SHOWN HEREON FOR COORDINATION PURPOSES ONLY.
8. WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS OR CONDITIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.
9. ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTIES DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
10. ALL PROPERTY MARKERS AND STREET LINE MONUMENTS SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED AND RESTORED BY A LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF MASSACHUSETTS AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ADDITIONAL BENCHMARK INFORMATION IF REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING BENCHMARKS. IF IT IS NECESSARY TO RELOCATE A BENCHMARK, IT SHALL BE RELOCATED BY A MASSACHUSETTS LAND SURVEYOR AND DONE SO AT THE CONTRACTOR'S EXPENSE.
12. ALL PERMITS AND APPROVALS NECESSARY FROM AGENCIES GOVERNING THE WORK SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK.
13. CONSTRUCTION DURING WET WEATHER OR WINTER CONDITIONS IS TO BE ANTICIPATED AND PROVISIONS TO ADEQUATELY ADDRESS THESE CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
14. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS INCLUDING THE TOWN OF ARLINGTON, MADOT, MADEP, MWRA, MUTCD, AND AASHTO.
15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY ALLEN & MAJOR ASSOCIATES DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK, OR THE OWNER'S EMPLOYEES, CUSTOMERS, OR THE GENERAL PUBLIC. THE SEAL OF THE ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PROVIDE THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), STATE, AND LOCAL REGULATIONS.
16. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.

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GRAPHIC SCALE

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(IN FEET)
1 inch = 10 ft.

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04.10.20

COMMONWEALTH OF MASSACHUSETTS
EDWARD J. JONES
CIVIL
NO. 49212
REGISTERED
PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

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882-892 MASSACHUSETTS AVE, LLC
452 MASSACHUSETTS AVE, STE 1
ARLINGTON, MA 02474

PROJECT:

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ARLINGTON, MA 02476

PROJECT NO.	2729-01	DATE:	04-10-20
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DESIGNED BY:	ARM	CHECKED BY:	BDJ/RC

PREPARED BY:

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environmental consulting ◆ landscape architecture
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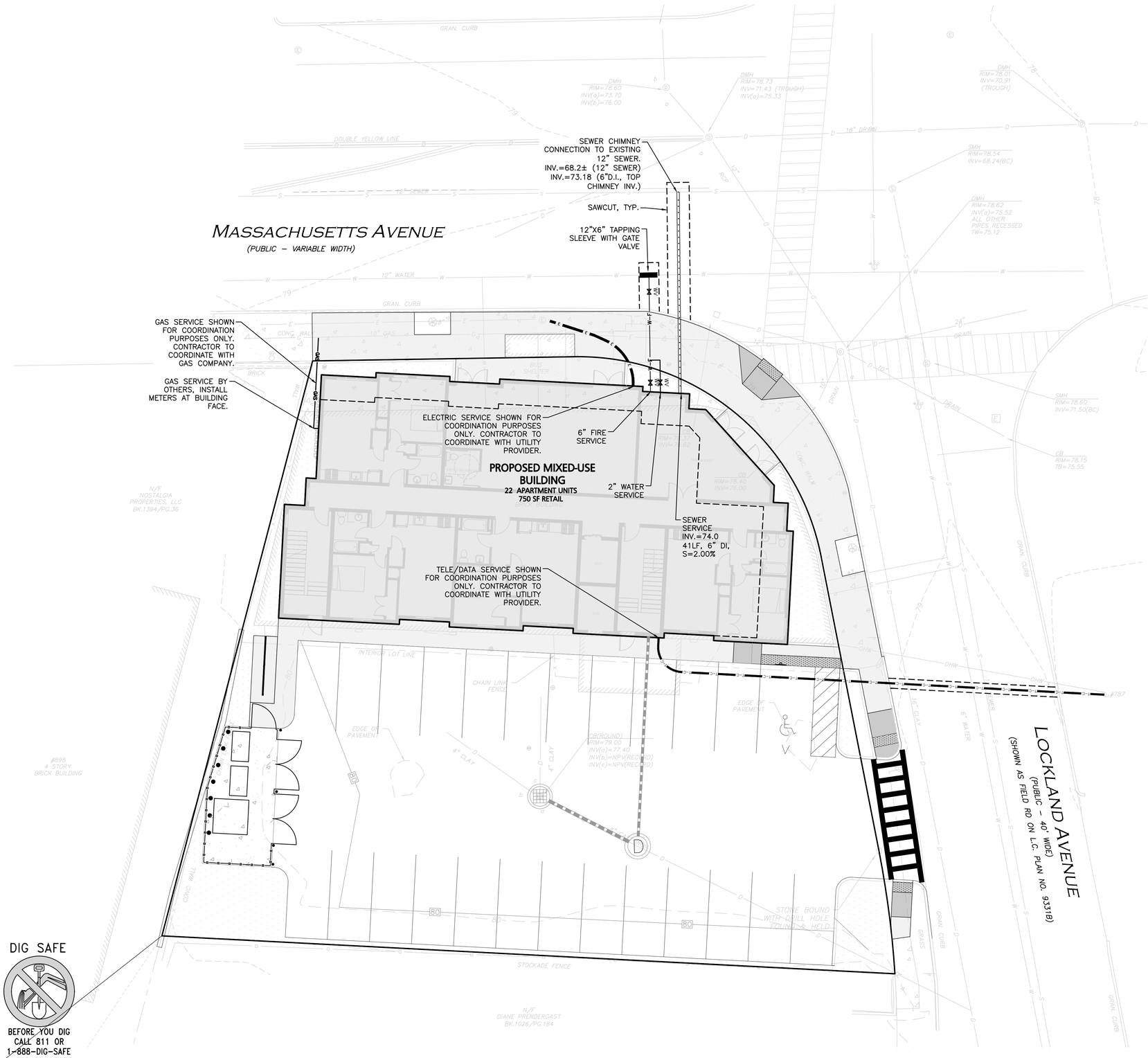
DRAWING TITLE:

GRADING & DRAINAGE PLAN

SHEET No.

C-103

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LEGEND

SEWER MANHOLE	S
SEWER CLEANOUT	C
SEWER VENT	V
SEWER LINE	
WATER LINE	W
WATER (FIRE SERVICE)	W-F
WATER (DOMESTIC SERVICE)	W-D
WATER VALVE	WV
GAS LINE	GAS
GAS VALVE	GV
ELECTRICAL CONDUIT	E E
TELE/CABLE CONDUIT	T-C T-C

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. A MINIMUM OF 18" VERTICAL CLEARANCE SHALL BE MAINTAINED WHERE WATER SERVICES CROSS STORM DRAIN AND SEWER LINES. WATER SERVICES SHALL BE ENCASED IN CONCRETE REGARDLESS OF CLEARANCE WHEN PASSING BELOW STORM DRAIN AND SEWER LINES. ENCASEMENT SHALL EXTEND ALONG WATER SERVICE A MINIMUM DISTANCE OF EIGHT FEET CENTERED ON THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
3. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
4. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
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GRAPHIC SCALE

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(IN FEET)
1 inch = 10 ft.

COMMONWEALTH OF MASSACHUSETTS
BRIAN D. JONES
CIVIL
NO. 49212
REGISTERED PROFESSIONAL ENGINEER
04.10.20

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

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PROJECT:

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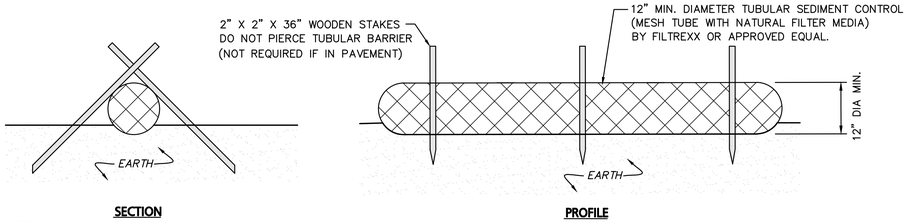
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DRAWING TITLE: UTILITIES PLAN

SHEET No. C-104

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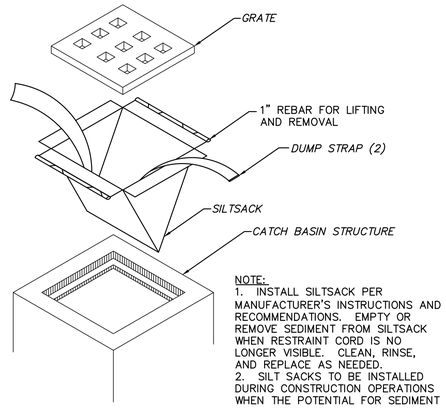


SECTION **PROFILE**

NOTES:

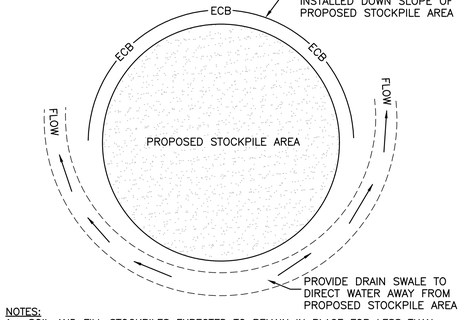
1. ALL MATERIALS TO MEET MANUFACTURERS SPECIFICATIONS.
2. INSTALL WOODEN STAKES IN A CRISS-CROSS PATTERN EVERY 8' ON CENTER.
2. OVERLAP TUBULAR BARRIER SEGMENTS A MINIMUM OF 12".
3. THE CONTRACTOR SHALL MAINTAIN THE TUBULAR BARRIERS IN A FUNCTIONAL CONDITION AT ALL TIMES. THE CONTROLS SHALL BE ROUTINELY INSPECTED BY THE CONTRACTOR.
4. WHERE THE TUBULAR BARRIERS REQUIRE REPAIR OR SEDIMENT REMOVAL, IT WILL BE COMPLETED BY THE CONTRACTOR AT NO ADDITIONAL COST.
5. AT A MINIMUM, THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE WHEN THEY REACH 1/3 THE EXPOSED HEIGHT OF THE BARRIER.

TUBULAR SEDIMENT BARRIER 1
NOT TO SCALE



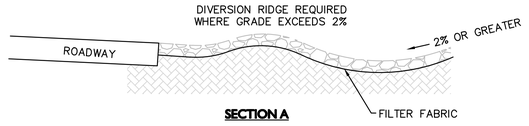
NOTE:
1. INSTALL SILTSACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. EMPTY OR REMOVE SEDIMENT FROM SILTSACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.
2. SILT SACKS TO BE INSTALLED DURING CONSTRUCTION OPERATIONS WHEN THE POTENTIAL FOR SEDIMENT TO ENTER EXISTING & PROPOSED BASINS EXISTS.

SILTSACK INLET DETAIL 2
NOT TO SCALE



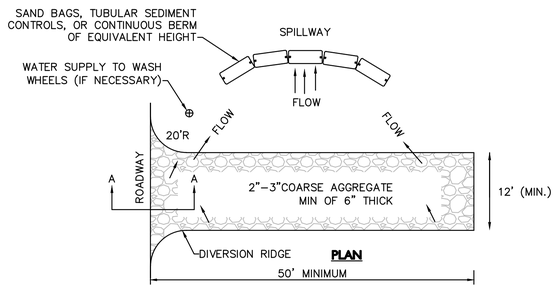
NOTES:
1. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 90 DAYS SHALL BE COVERED WITH STRAW AND MULCH (AT 100LBS/1,000 SF), OR WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
2. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR 90 DAYS OR MORE SHALL BE SEEDED WITH WINTER RYE (FOR FALL SEEDING AT 1LB/1,000 SF) OR OATS (FOR SUMMER SEEDING AT 2LB/1,000 SF) AND THEN COVERED WITH STRAW MULCH (AT 100LB/1,000 SF) OR AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

STOCKPILE PROTECTION DETAIL 3
NOT TO SCALE



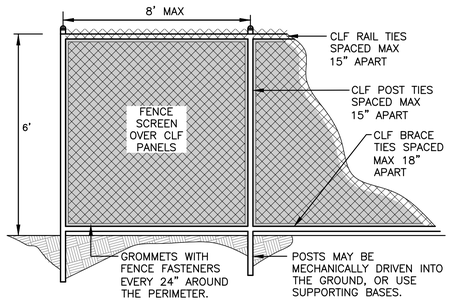
SECTION A

NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTERING THE PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. USE SANDBAGS, TUBULAR SEDIMENT CONTROLS, OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.



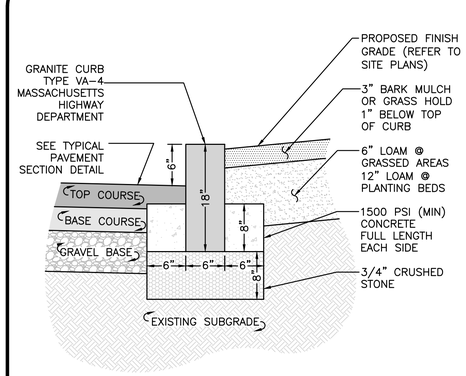
PLAN

TEMPORARY CONSTRUCTION ENTRANCE/EXIT 4
NOT TO SCALE

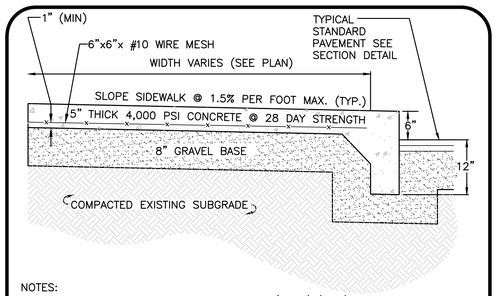


NOTES:
1. SCREEN MATERIAL SHALL BE MADE FROM KNITTED HIGH DENSITY POLYETHYLENE WITH UV ADDITIVES.
2. SCREEN FILAMENT STRENGTH SHALL BE A MINIMUM OF 50LBS/FT.
3. SCREEN MATERIAL BREAK STRENGTH SHALL BE A MINIMUM OF 500 LBS/FT.
4. SCREEN SHADE / WIND BLOCKAGE SHALL BE A MINIMUM OF 85%.
5. SCREEN COLOR SHALL BE GREEN OR BLACK.

TEMPORARY CONSTRUCTION FENCE w/ SCREEN 5
NOT TO SCALE

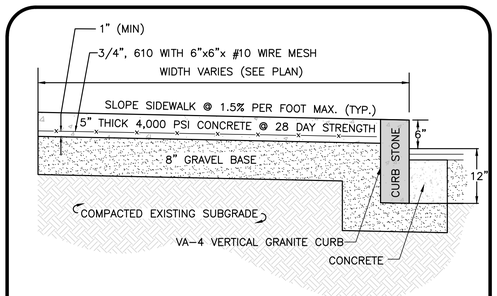


VERTICAL GRANITE CURB 6
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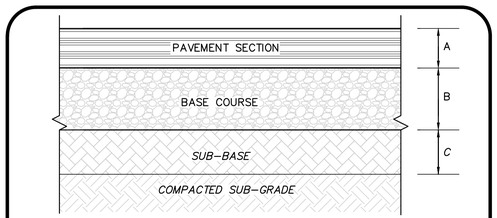
NOTES:
1. SIDEWALK TO HAVE TOOLED JOINTS IN A 5' x 5' (TYP.) GRID WITH EXPANSION JOINTS 15' ON CENTER WITH PREMOLDED FILLER.
2. SEE PLAN FOR ELEVATIONS AT CURB
3. SIDEWALK CROSS SLOPE TO BE 1.5% MAX & SIDEWALK LONGITUDINAL RUNNING SLOPE TO BE 4.5% MAX, TYP.
4. APPLY BRUSH MARKS PERPENDICULAR TO TRAVEL PATH.

CONCRETE SIDEWALK WITH MONOLITHIC CURB 7
NOT TO SCALE



NOTES:
1. SIDEWALK TO HAVE TOOLED JOINTS IN A 5' x 5' (TYP.) GRID WITH EXPANSION JOINTS 15' ON CENTER AND PREMOLDED FILLER.
2. SEE PLAN VIEW FOR ELEVATIONS AT CURB
3. SIDEWALK CROSS SLOPE TO BE 1.5% MAX & SIDEWALK LONGITUDINAL RUNNING SLOPE TO BE 4.5% MAX, TYP.

CONCRETE SIDEWALK WITH VGC CURBSTONE 8
NOT TO SCALE



NOTES:

1. PAVEMENT SECTION, BASE COURSE, AND SUBGRADE SHALL BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. IN THE ABSENCE OF A GEOTECHNICAL ENGINEER'S RECOMMENDATION, THE MATERIALS AND THICKNESS SHALL BE AS SHOWN HEREON.
2. SUBGRADE SHALL BE COMPACTED TO 95% OF PROCTOR
3. EXISTING SUBSURFACE SOILS SHALL BE PROOF-ROLLED.

MATERIALS AND THICKNESSES:

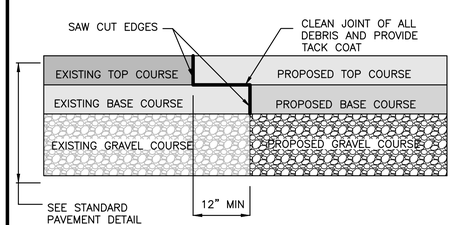
A = 1.5" ASPHALT CONCRETE - SURFACE COURSE (M3.11.0, TABLE A, TOP COURSE)
2.5" ASPHALT CONCRETE - BINDER COURSE (M3.11.0, TABLE A, BINDER COURSE)

B = 6" PROCESSED GRAVEL BASE (MHD M2.01.7)

C = 12" BANK RUN GRAVEL MHD M1.03.0 TYPE B)

ASPHALT PAVEMENT SECTION 9
NOT TO SCALE

NOTE:
TACK COAT - PROVIDE EMULSIFIED ASPHALT WHICH CONFORMS TO THE REQUIREMENTS OF THE STATE SPECIFICATIONS, DILUTED WITH ONE PART WATER TO ONE ONE PART ASPHALT FOLLOWING AASHTO M140/ASTM D997, OR AASHTO M208/ASTM D2397, SS-1H, CSS-1, OR CSS-1H.



PAVEMENT KEY CUT DETAIL 10
NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS
ERIC J. JONES
CIVIL
No. 40212
REGISTERED
PROFESSIONAL ENGINEER
04.10.20

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
882-892 MASSACHUSETTS AVE, LLC
452 MASSACHUSETTS AVE, STE 1
ARLINGTON, MA 02474

PROJECT:
892 MASSACHUSETTS AVE
ARLINGTON, MA 02476

PROJECT NO.	2729-01	DATE:	04-10-20
SCALE:	AS SHOWN	DWG. NAME:	C2729-01
DESIGNED BY:	ARM	CHECKED BY:	BDJ/RC

PREPARED BY:
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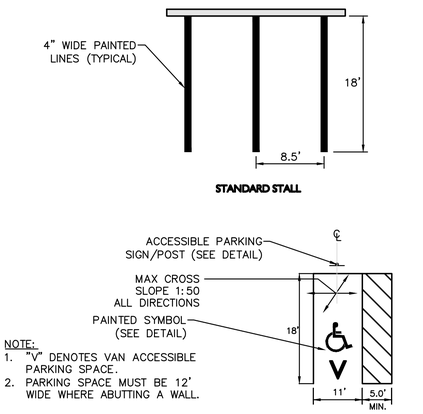
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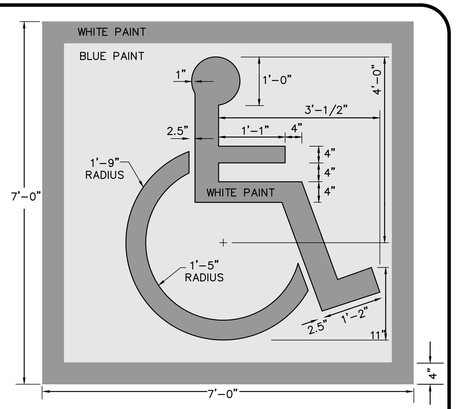
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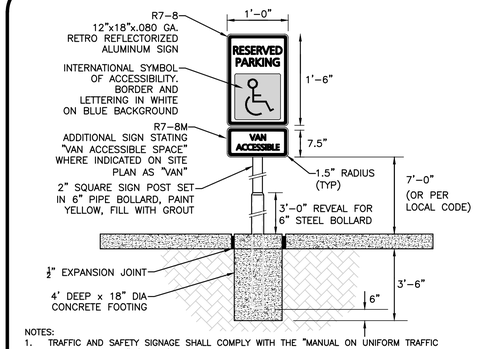


ADA AND STANDARD PARKING STRIPING (1)
NOT TO SCALE



SYMBOL TO BE CENTERED ON WIDTH OF PARKING STALL. SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND. USE WHITE ON BLUE (COLOR #105090 IN FEDERAL STANDARD 5952) DOUBLE COAT.

ACCESSIBLE PARKING STALL PAVEMENT MARKING (2)
NOT TO SCALE



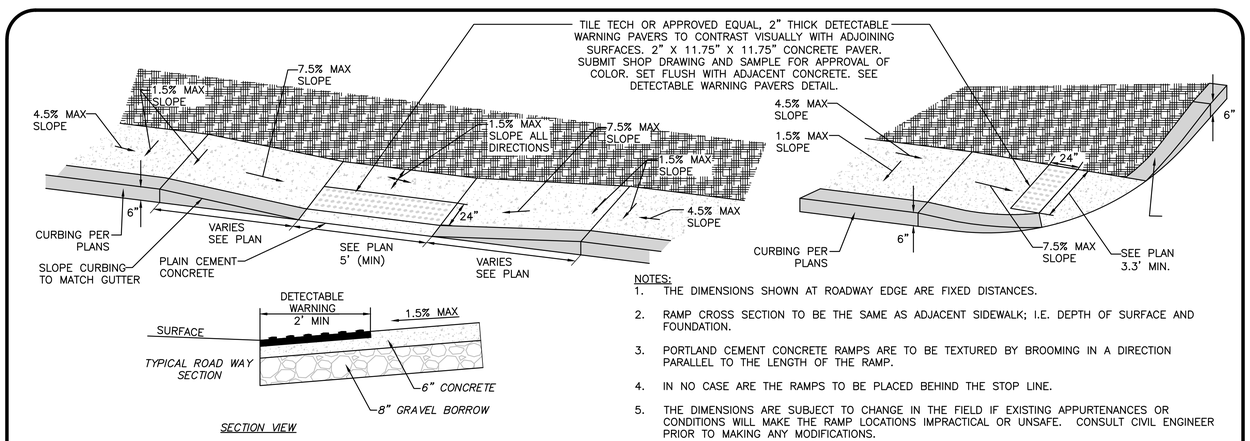
NOTES:
1. TRAFFIC AND SAFETY SIGNAGE SHALL COMPLY WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) STANDARDS.
2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT.
3. PROVIDE ONE (1) SIGN PER ACCESSIBLE SPACE. SEE SITE PLAN FOR EXACT LOCATION.
4. EXPANSION JOINT MATERIAL NOT REQUIRED FOR FLEXIBLE PAVEMENT.

ADA ACCESSIBLE PARKING SIGNAGE (R7-8m) (3)
NOT TO SCALE

DESC.	SIGN	SIZE	MOUNTING HEIGHT	DESCRIPTION	REFLEC-TORIZED
R7-8M (MODIFIED)	HANDICAPPED PARKING; SPECIAL PLATE REQUIRED UNAUTHORIZED VEHICLES MAY BE TOWED AT THE OWNERS EXPENSE; VAN ACCESSIBLE	12" x 26"	7' - 0"	WHITE TEXT ON BLUE FIELD WITH WHITE BORDER	YES

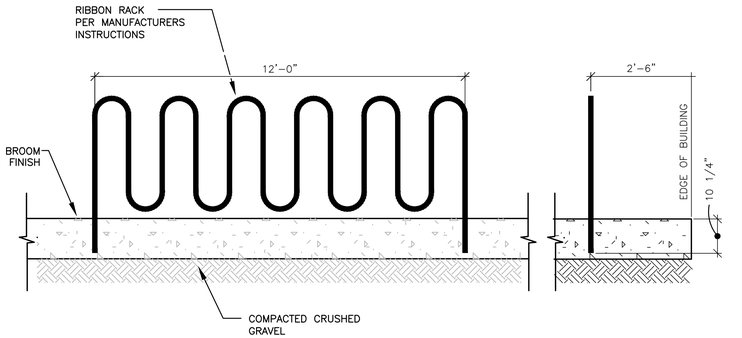
1. TRAFFIC AND SAFETY SIGNAGE SHALL COMPLY WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) STANDARDS.
2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT.

SIGN TABLE (4)
NOT TO SCALE

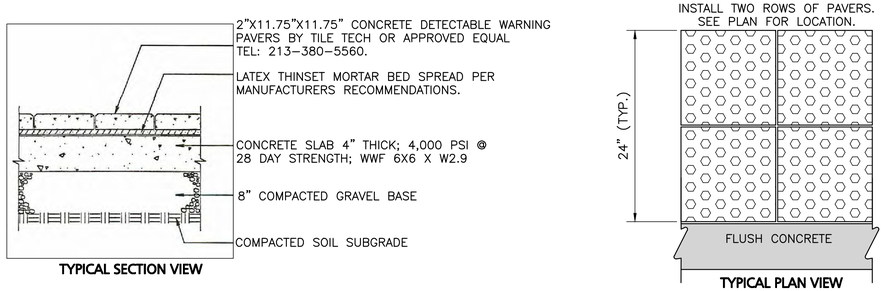


NOTES:
1. THE DIMENSIONS SHOWN AT ROADWAY EDGE ARE FIXED DISTANCES.
2. RAMP CROSS SECTION TO BE THE SAME AS ADJACENT SIDEWALK; I.E. DEPTH OF SURFACE AND FOUNDATION.
3. PORTLAND CEMENT CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
4. IN NO CASE ARE THE RAMPS TO BE PLACED BEHIND THE STOP LINE.
5. THE DIMENSIONS ARE SUBJECT TO CHANGE IN THE FIELD IF EXISTING APPURTENANCES OR CONDITIONS WILL MAKE THE RAMP LOCATIONS IMPRACTICAL OR UNSAFE. CONSULT CIVIL ENGINEER PRIOR TO MAKING ANY MODIFICATIONS.

HANDICAP CURB CUT & CURB TRANSITION (5)
NOT TO SCALE

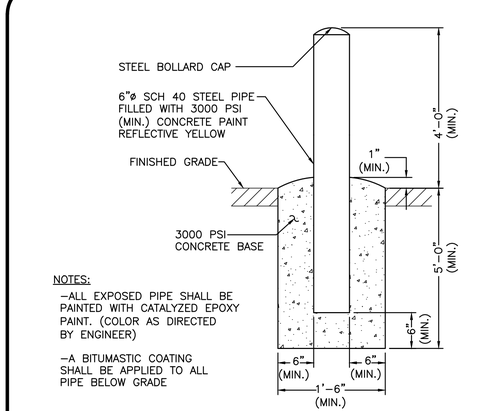


TYPICAL BIKE RACK (6)
NOT TO SCALE



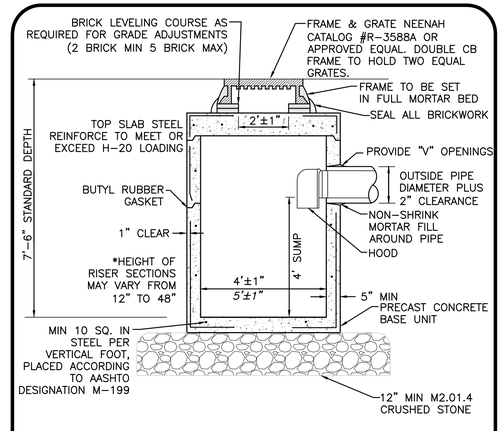
NOTES:
1. CONCRETE SLAB SHALL BE SLOPED 1.5% CROSS PITCH MAX TO PROVIDE COMPLETE SURFACE DRAINAGE. SEE GRADING PLAN & HANDICAP CURB CUT / CURB TRANSITION DETAIL.
2. SLAB TO HAVE STEEL TROWEL AND FINE BROOM FINISH. DO NOT USE CURING COMPOUNDS. CONTRACTOR TO ADD EXPANSION JOINTS AND PREMOLDED FILLER AT EDGE OF TILES AND ADJACENT MATERIAL.
3. SET TILES FLUSH WITH ADJACENT MATERIALS.
4. SUBMIT SHOP DRAWINGS OF TILES AND SAMPLE FOR APPROVAL OF COLOR TO OWNER / ARCH.
5. INSTALL DETECTABLE WARNING PAVERS PER MANUFACTURER'S RECOMMENDATIONS.

TACTILE WARNING PAVERS (7)
NOT TO SCALE



NOTES:
-ALL EXPOSED PIPE SHALL BE PAINTED WITH CATALYZED EPOXY PAINT. (COLOR AS DIRECTED BY ENGINEER)
-A BITUMASTIC COATING SHALL BE APPLIED TO ALL PIPE BELOW GRADE

FIXED PIPE BOLLARD DETAIL (8)
NOT TO SCALE



CATCH BASIN (9)
NOT TO SCALE

PROFESSIONAL ENGINEER FOR
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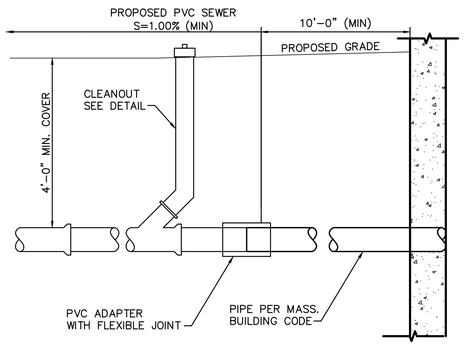
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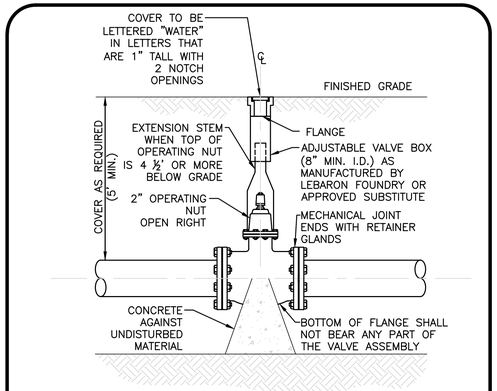
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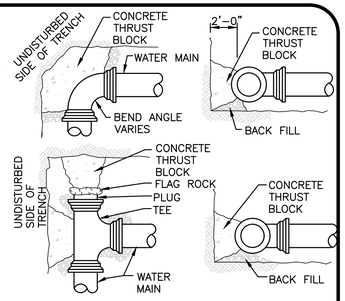
BUILDING SEWER SERVICE (1)
NOT TO SCALE



NOTES:
1.) CONTRACTOR MAY USE ANCHOR TEES AT HIS OPTION.
2.) HYDRANTS AND VALVES SHALL BE RIGHT TURN OPEN (OPEN RIGHT).

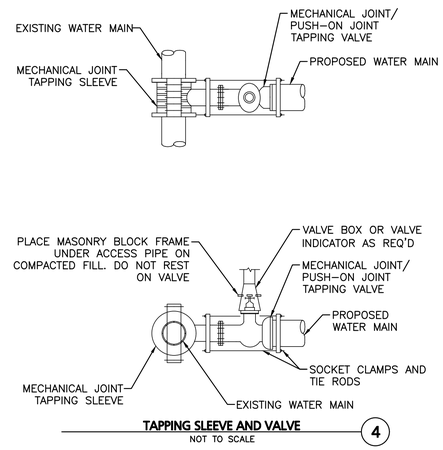
GATE VALVE (2)
NOT TO SCALE

NOTES:
1. ALL WATER MAIN FITTINGS, BENDS, TEES, PLUGS ETC. SHALL BE RESTRAINED W/ THRUST BLOCKS EXCEPT WHERE NOTED.
2. ALL THRUST BLOCKS & COLLARS SHALL BE INSTALLED SO THAT THEY BEAR AGAINST UNDISTURBED EARTH.
3. SIZE OF CONCRETE THRUST BLOCKS SHALL BE AS NOTED BELOW.
4. MINIMUM COMPRESSIVE STRENGTH OF THRUST BLOCK CONCRETE SHALL BE 3,000 P.S.I.
5. KEEP CONCRETE CLEAR OF MECHANICAL JOINTS.
6. THE BELOW PREDICATED ON A WATER PRESSURE OF 225 PSI AND A SOIL RESISTANCE OF 2000 PSF (TILL). FOR OTHER SOILS THE VALUES IN THE ABOVE TABLE SHALL BE MULTIPLIED BY:

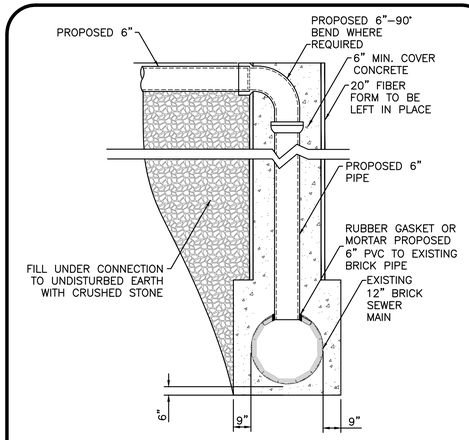


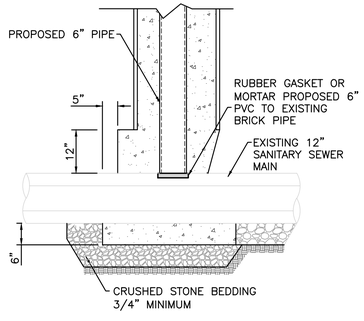
MINIMUM THRUST BLOCK BEARING AREAS				
PIPE ø	90° BEND (SQ. FT.)	45° BEND (SQ. FT.)	22.5° BEND (SQ. FT.)	TEES, PLUGS, CAPS & HYD. (SQ.FT.)
6"	5	3	3	4
8"	9	6	3	9
10"	13	7	4	12
12"	20	10	5	16

THRUST BLOCK DETAILS (3)
NOT TO SCALE



TAPPING SLEEVE AND VALVE (4)
NOT TO SCALE

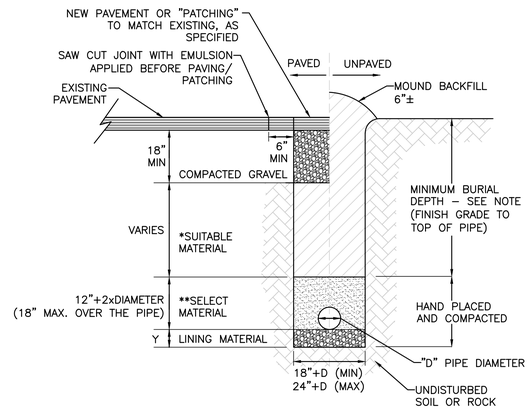




SANITARY SEWER CHIMNEY CONNECTION DETAIL (5)
NOT TO SCALE

NOTES:

1. MINIMUM BURIAL DEPTH (FINISH GRADE TO TOP OF PIPE)
 GRAVITY PIPE – SEE PLAN OR PROFILE
 PRESSURE PIPE UNDER PAVING – 4'
 PRESSURE PIPE BENEATH UNPAVED – 3'
2. WHERE BACKFILL IS DESIGNATED AS COMPACTED, THIS MEANS 90 TO 95% STANDARD PROCTOR. AASHTO T-99. ALL FILL PLACED BELOW PIPES AND STRUCTURES MUST MEET THIS REQUIREMENT.
3. FOR ALL TRENCHES WITH A GRADE GREATER THAN 4% AND/OR WHERE GROUNDWATER IS APPARENT, INSTALL CLAY DAMS AROUND THE PIPE AT 100' INTERVALS.



TRENCH DETAIL (6)
NOT TO SCALE

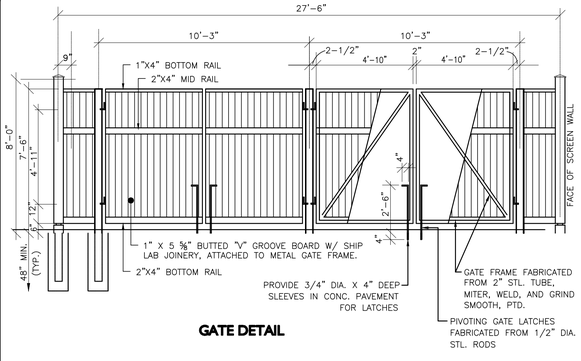
CONDITION & PIPE	**SELECT MATERIAL	LINING MATERIAL	Y-DIMENSION
DUCTILE IRON "ORDINARY SOIL"	TYPE I, II, OR III	SAND OR TYPE III	3"
RCP "ORDINARY SOIL"	TYPE II OR III	SAND OR TYPE III	3"
ALL PIPE OVER BEDROCK OR LEDGE	TYPE II OR III	SAND OR TYPE III	8"
DUCTILE IRON IN CLAY OR MUCK	TYPE II OR III	SAND	4"
RCP IN CLAY	TYPE II OR III	SAND	8"
ALL PLASTICS	TYPE III	SAND OR TYPE III	6"

* SUITABLE MATERIAL SHALL CONTAIN NO STONE GREATER THAN 4" IN DIAMETER, NO FROZEN LUMPS, AND ONLY MINOR AMOUNTS OF CLAY OR ORGANIC MATERIAL. ALL MATERIAL TO BE PLACED IN MAX 12" LIFTS AND COMPACTED BEFORE PLACING NEXT LIFT.

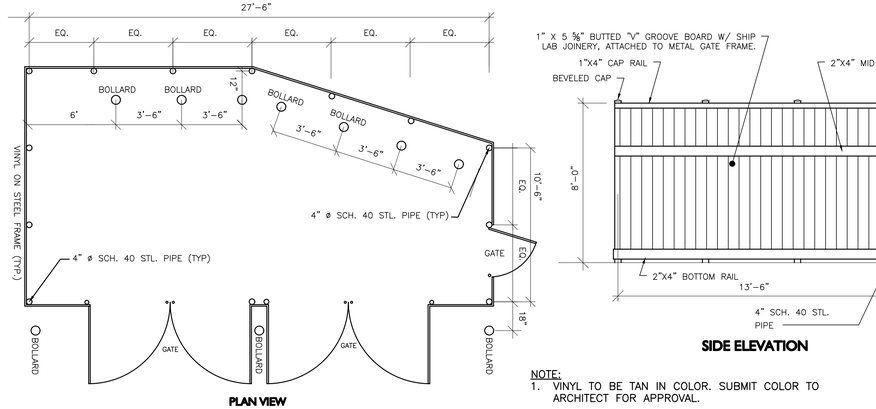
**TYPE I MATERIAL SHALL BE EITHER GRAVEL OR EXCAVATED MATERIAL CONTAINING NO STONES GREATER THAN 1.5" DIAMETER, NO FROZEN LUMPS, CLAY OR ORGANIC MATERIAL.

**TYPE II MATERIAL SHALL BE CLEAN, HARD, CRUSHED OR NATURAL STONE WITH A GRADATION BY WEIGHT OF 100% PASSING A 1.5" SQUARE OPENING, NOT MORE THAN 25% PASSING A ¾" OPENING, AND NOT MORE THAN 5% PASSING A ¼" SQUARE OPENING.

**TYPE III MATERIAL SHALL BE CLEAN, HARD, CRUSHED STONE FREE FROM COATINGS AND THOROUGHLY WASHED WITH A GRADATION BY WEIGHT OF 100% PASSING A 1" SQUARE OPENING, AND 0 TO 5% PASSING A ¼" SQUARE OPENING.



GATE DETAIL



PLAN VIEW

SIDE ELEVATION

NOTE:
1. VINYL TO BE TAN IN COLOR. SUBMIT COLOR TO ARCHITECT FOR APPROVAL.

VINYL DUMPSTER ENCLOSURE (7)
NOT TO SCALE

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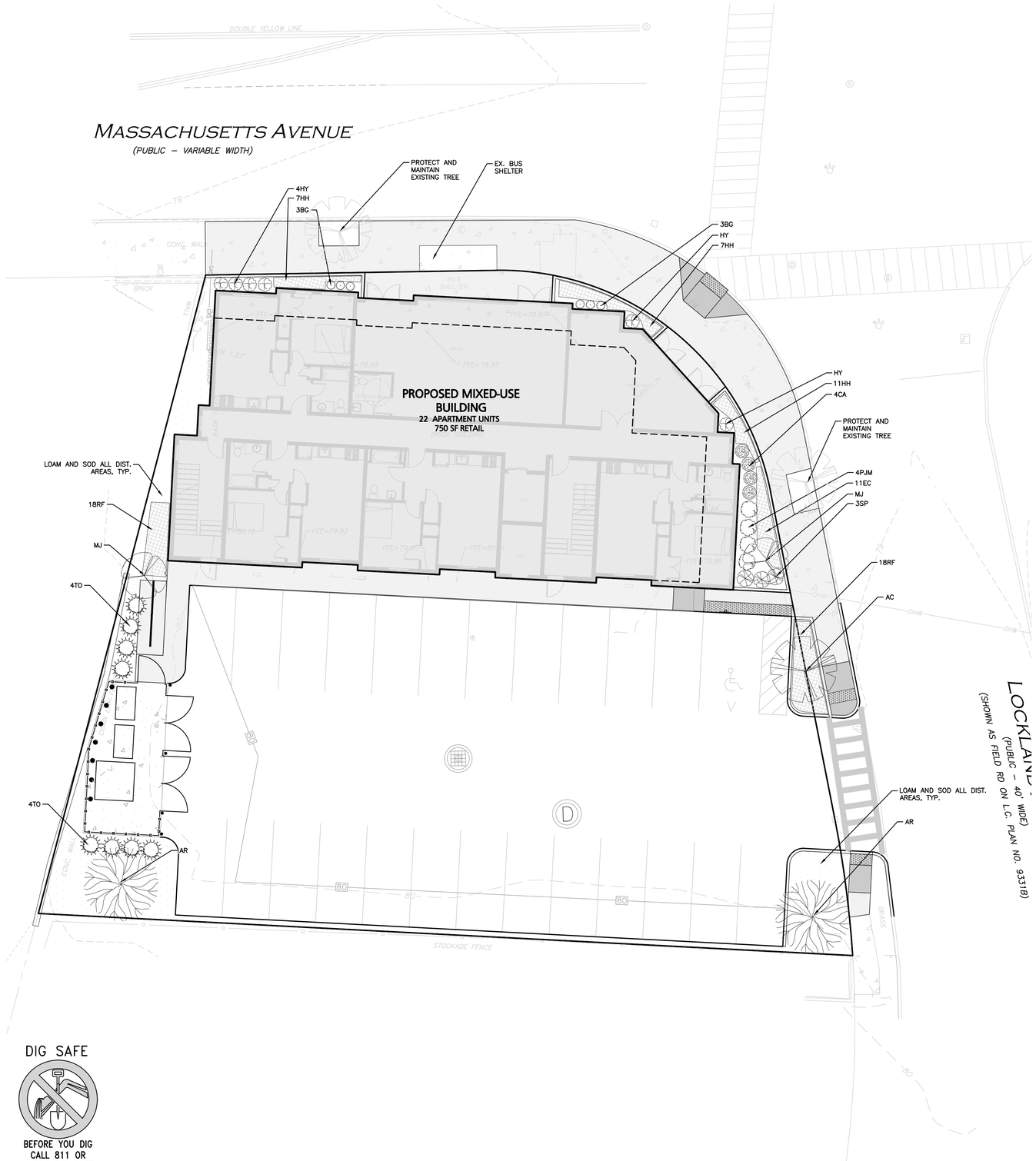
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LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- FLOWERING TREE
- SHRUBS
- MULCH BED
- PERENNIALS/GROUNDCOVER
- WILDFLOWER SEED MIX
- EROSION CONTROL SEED MIX

PLANTING SCHEDULE-TREES, SHRUBS, GROUNDCOVERS & PERENNIALS

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	MIN. SIZE	SPACING	COMMENTS
EVERGREEN TREES						
TO	6	THUJA O. 'WINTERGREEN'	WINTERGREEN ARBORVITAE	6–7' HT	AS SHOWN	B&B
FLOWERING TREES						
AC	1	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	2.5–3" CAL.	AS SHOWN	B&B
AR	2	ACER RUBRUM 'BOWHALL'	BOWHALL RED MAPLE	2.5–3" CAL.	AS SHOWN	B&B
MJ	2	MAGNOLIA LILIFLORA 'JANE'	JANE MAGNOLIA	5–6' HT.	AS SHOWN	B&B
SHRUBS						
CA	4	CORNUS ALBA 'IVORY HALO'	IVORY HALO DOGWOOD	#3	AS SHOWN	POT
BG	6	BUXUS 'GREEN MOUNTAIN'	GREEN MOUNTAIN BOXWOOD	#2	AS SHOWN	POT
HY	6	HYDRANGEA ARBORESCENS INCREDIBALL	INCREDIBALL HYDRANGEA	#5	AS SHOWN	POT
PJM	4	RHODODENDRON 'PJM COMPACT CLONE'	COMPACT PJM RHODODENDRON	#3	AS SHOWN	B&B
SP	3	SYRINGA PATULA 'MISS KIM'	MISS KIM LILAC	#5	AS SHOWN	POT
PERENNIALS						
EC	13	ECHINACEA PURPUREA 'KIMS KNEEHIGH'	KIMS KNEEHIGH CONEFLOWER	#1	24" O.C	STAGGERED
HH	29	HOSTA 'HADSPEN BLUE'	HADSPEN BLUE HOSTA	#1	24" O.C	STAGGERED
RF	41	RUDBECKIA FULGIDA 'CITY GARDEN'	CITY GARDEN BLACK EYED SUSAN	#1	24" O.C.	STAGGERED

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

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CALL 811 OR
1-888-DIG-SAFE
1-888-344-7233

REGISTERED LANDSCAPE ARCHITECT FOR ALLEN & MAJOR ASSOCIATES, INC.

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DRAWING TITLE:

LANDSCAPE PLAN

SHEET No.

L-101

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LOAM AND SODDING NOTES

CONTRACTOR SHALL SOD AREAS NOTED ON THE PLANS.

SOD IS TO BE A BLEND OF FOUR TO FIVE CURRENT AND IMPROVED HYBRID BLUEGRASS AND FESCUE MIXES APPROPRIATE FOR BOTH SEMI-SHADED AND AREAS OF SUN.

HYBRIDS MAY INCLUDE: BLACKSTONE KENTUCKY BLUEGRASS, AWARD KENTUCKY BLUEGRASS, CHALLENGER KENTUCKY BLUEGRASS, BLACKBURG II KENTUCKY BLUEGRASS OR COMPARABLE AND EQUAL BLUEGRASS HYBRIDS.

1. SOD SHALL BE HIGH QUALITY, NURSERY GROWN ON CULTIVATED MINERAL AGRICULTURAL SOILS. SOD SHALL BE MOIST, AND MACHINE CUT AT A UNIFORM SOIL THICKNESS OF AT LEAST ⅝" AT TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL INCLUDE TOP GROWTH AND THATCH. SOD SHALL BE FREE OF DISEASES, WEEDS, BARE SPOTS, OR INSECTS.

2. SODDING TO BE COMPLETED "IN SEASON" BETWEEN APRIL 1 TO JUNE 15 OR AUGUST 15 TO OCTOBER 1, EXCEPT FOR RE-SODDING OF BARE SPOTS. IF UNABLE TO SOD WITHIN THESE TIMEFRAMES, CONTRACTOR TO INSTALL EROSION CONTROL MATS ON ALL SLOPES 3:1 AND OVER, HYDROSEED ALL EXPOSED AREAS, ADD SOIL STABILIZER "FLUX TERRA HP-FGM SOIL STABILIZER" AS MANUFACTURED BY "PROFILE" TO HYDROSEED (AT RATE OF 3,000 LBS PER ACRE), AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR TO COMPLETE ALL ABOVE "OUT OF SEASON" REQUIREMENTS AND THEN ALSO BE RESPONSIBLE FOR RE-GRADING AND RE-SODDING ALL DISTURBED, ERODED, OR BARE SPOTS WITHIN NEXT CLOSEST PLANTING SEASON IN FALL OR SPRING AT NO ADDITIONAL COST TO OWNER. CONTRACTOR RESPONSIBLE FOR ALL MAINTENANCE UNTIL FINAL ACCEPTANCE OF LAWN AREAS INCLUDING: WATERING, ADDING FERTILIZERS AND LIME AND MOWING AT NO ADDITIONAL COST TO OWNER.

3. COMMERCIAL FERTILIZER SHALL BE APPLIED AT THE RATE OF 25 POUNDS PER 1000 SQ. FT. OR AS RECOMMENDED BY THE TESTING AGENCY. LIME TO BE SPREAD AT THE RATE OF 100 POUNDS PER 1000 SQ. FT OR AS RECOMMENDED BY THE TESTING AGENCY. COMMERCIAL FERTILIZER SHALL BE A COMPLETE FERTILIZER CONTAINING AT LEAST 50% OF THE NITROGEN OF WHICH IS DERIVED FROM NATURAL ORGANIZE SOURCES OF UREAFORM. IT SHALL CONTAIN THE FOLLOWING PERCENTAGES BY WEIGHT: NITROGEN (N) 10%, PHOSPHORUS (P) 6%, POTASH (K) 4%. LIME SHALL BE AN APPROVED AGRICULTURAL LIMESTONE CONTAINING NOT LESS THAN 85% OF TOTAL CARBONATES. LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT 50% WILL PASS A 100 MESH SIEVE AND 90% WILL PASS THROUGH A 20 MESH SIEVE.

4. CONTRACTOR RESPONSIBLE FOR WATERING, MOWING, AND RE-SODDING OF LAWN BARE SPOTS UNTIL A UNIFORM, HEALTHY STAND OF GRASS IS ESTABLISHED AND ACCEPTED.

LANDSCAPE NOTES

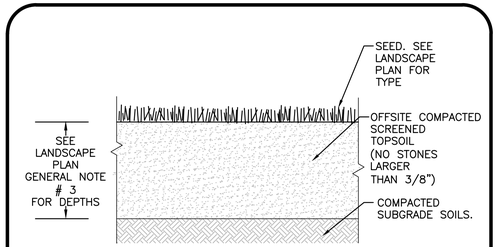
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF ARLINGTON, MA.
2. PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES, ANY PERMITTING AGENCIES, AND "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS IN ADVANCE OF ANY WORK THAT WILL REQUIRE EXCAVATION. CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF NAY CONFLICTS IN WRITING.
4. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA, ANY TREES NOTED AS "SEAL OR SELECTED SPECIMEN" SHALL BE TAGGED AND SEALED BY THE LANDSCAPE ARCHITECT.
5. ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
6. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON PLANT LIST. QUANTITIES SHOWN ON PLANS SHALL GOVERN OVER PLANT LIST.
7. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
8. ALL PLANT MATERIALS INSTALLED SHALL MEET THE GUIDELINES ESTABLISHED BY THE STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
9. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE.

DIG SAFE

BEFORE YOU DIG
CALL 811 OR
1-888-DIG-SAFE
1-888-344-7233

LANDSCAPE NOTES CONT.

10. ALL DISTURBED AREAS NOT OTHERWISE NOTED SHALL RECEIVE 6" OF SUITABLE LOAM & SEED LAWNS WITH 3:1 OR GREATER SLOPES SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET.
11. ANY FALL TRANSPLANTING HAZARD PLANTS SHALL BE DUG IN THE SPRING AND STORED FOR FALL PLANTING.
12. TREES SHALL HAVE A MINIMUM CALIPER AS INDICATED ON THE PLANTING SCHEDULE TAKEN ONE FOOT ABOVE THE ROOT CROWN.
13. ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 3" OF PINE BARK MULCH. GROUND COVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH
14. ALL DECIDUOUS TREES ADJACENT TO WALKWAYS AND ROADWAYS SHALL HAVE A BRANCHING PATTERN TO ALLOW FOR A MINIMUM OF 7' OF CLEARANCE BETWEEN THE GROUND AND THE LOWEST BRANCH.
15. ALL TREE STAKES SHALL BE STAINED DARK BROWN.
16. CONTRACTOR RESPONSIBLE FOR WATERING, AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.
17. ALL PARKING ISLANDS PLANTED WITH SHRUBS SHALL HAVE 24" OF TOP SOIL. FINISH GRADE SHALL BE EQUAL TO THE TOP OF CURB.
18. SOIL SAMPLES, TESTS, AND SHOP DRAWINGS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT OR THE OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
19. AN MINIMUM 18" WIDE BARRIER OF 1" GRAY OR TAN PEASTONE SHALL BE INSTALLED IN ALL PLANT BEDS WHICH ABUT THE BUILDINGS. NO MULCH IS ALLOWED WITHIN 18" OF ALL BUILDINGS PER THE LATEST EXECUTIVE OFFICE OF PUBLIC SAFETY AND SECURITY DEPARTMENT OF FIRE SERVICES REGULATION (527 CMR 17.00). INSTALL 6" DEEP OF PEASTONE WITH MIRAFI WEED FABRIC BENEATH AND STEEL EDGING BETWEEN THE PEASTONE AND ADJACENT MULCH BED.
20. ALL PROPOSED LANDSCAPE AREAS INCLUDING MOWED LAWNS, TREES, SHRUB BEDS, AND PERENNIALS SHALL BE PROVIDED WITH WATER EFFICIENT UNDERGROUND IRRIGATION. DESIGN AND INSTALLATION OF IRRIGATION SYSTEM TO BE PERFORMED BY AN APPROVED IRRIGATION DESIGN BUILD CONTRACTOR OR BY AN APPROVED EQUAL, TO BE DETERMINED BY THE OWNERS REPRESENTATIVE AND LANDSCAPE ARCHITECT. IRRIGATION SYSTEM IS TO BE DESIGNED FOR EFFICIENT WATER USAGE INCLUDING: USE OF DRIP IRRIGATION FOR SHRUBS AND PERENNIALS, IRRIGATION SYSTEM WITH HEAD-TO-HEAD COVERAGE, A CENTRAL SHUT-OFF VALVE, AND A RAIN SENSOR TO SHUT OFF IRRIGATION DURING RAIN EVENTS.

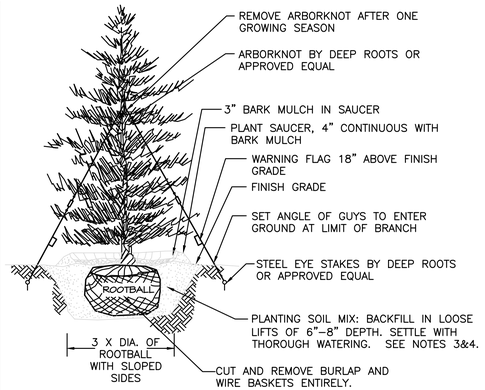


TEXTURE CLASS	% OF TOTAL WEIGHT
SAND	45% – 65%
SILT	15% – 35%
CLAY	5% – 20%

SIEVE	% PASSING
3/8"	100
NO. 4	85–100
NO. 40	60–85
NO. 100	38–60
NO. 200	10–35
20 um	LESS THAN 5%

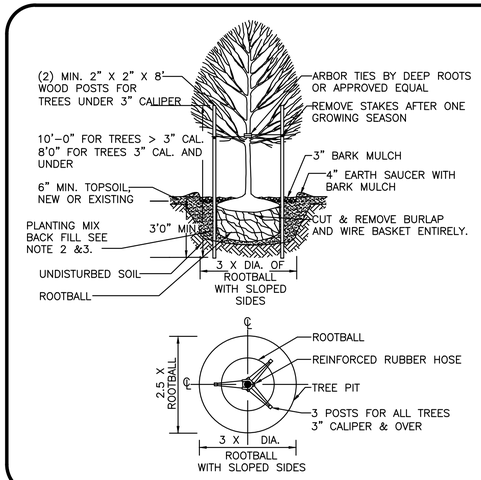
NOTES:
1. TOP OF LOAM (TOPSOIL) IS FINISH GRADE.
2. ALL TOPSOIL (BOTH ONSITE AND OFFSITE SOURCES) SHALL BE COMPOSED OF A NATURAL, FERTILE, FRIABLE SOIL TYPICAL OF CULTIVATED TOPSOILS OF THE LOCALITY. OFFSITE SOIL SHALL BE SUITABLE FOR THE GERMINATION OF SEEDS AND SUPPORT OF VEGETATIVE GROWTH, WITH ADDITIVES, IF REQUIRED, TO ACHIEVE PARTICLE DISTRIBUTION AND ORGANIC CONTENT BELOW. TOPSOIL SHALL BE TAKEN FROM A WELL-DRAINED, ARIABLE SITE, FREE OF SUBSOIL, LARGE STONES, EARTH CLODS, STICKS, STUMPS, CLAY LUMPS, ROOTS, OTHER OBJECTIONABLE, EXTRANEOUS MATTER OR DEBRIS NOR CONTAIN TOXIC SUBSTANCES.
3. THE CONTRACTOR SHALL PROVIDE THE OWNER / LANDSCAPE ARCHITECT WITH TOPSOIL TEST RESULTS (RECOMMEND UMASS AMHERST SOIL TESTING LAB) FOR APPROVAL PRIOR TO OBTAINING AND PLACING THE SOIL. IF ANY TOPSOIL IS PURCHASED OR PLACED PRIOR TO APPROVAL BY OWNER / LANDSCAPE ARCHITECT, IT IS AT CONTRACTORS RISK, AND IT CAN BE REMOVED AT NO ADDITIONAL COST TO THE OWNER. IF THE PLANTING SOIL (BOTH ONSITE AND OFFSITE SOURCES) DOES NOT FALL WITHIN THE REQUIRED SIEVE ANALYSIS, TEXTURAL CLASS, ORGANIC CONTENT, OR PH RANGE, IT SHALL BE ADJUSTED TO MEET THE SPECIFICATIONS THROUGH THE ADDITION OF SAND, COMPOST, LIMESTONE, OR ALUMINUM SULFATE TO BRING IT WITHIN THE SPECIFIED LIMITS AT NO ADDITIONAL COST TO THE OWNER.
4. TOPSOIL SHALL HAVE A PH VALUE BETWEEN 5.5 AND 6.5. TOPSOIL SHALL CONTAIN BETWEEN 4% AND 8% ORGANIC MATTER OF TOTAL DRY WEIGHT AND SHALL CONFORM TO THE FOLLOWING GRADATION AND TEXTURE CLASS ABOVE.

TOPSOIL FOR LAWN, TREES, SHRUBS, & PERENNIALS (2)
NOT TO SCALE



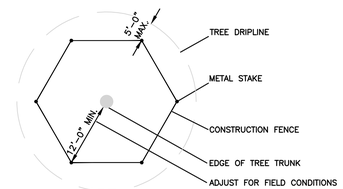
NOTES
1. TREES SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IT BORE TO NURSERY OR FIELD GRADE. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM TRUNK FLARE OF TREE TO DETERMINE ACTUAL TOP OF ROOTBALL AREA.
2. INSTALL THREE GUYS PER TREE; EQUALLY SPACED AROUND BALL.
3. ATTACH GUYS AT 2/3 HEIGHT OF TREE.
4. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
5. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.

EVERGREEN TREE DETAIL (1)
NOT TO SCALE

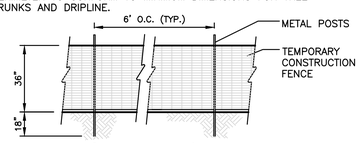


NOTES:
1. ALL TREES SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM TRUNK FLARE OF TREE TO DETERMINE ACTUAL ROOTBALL AREA.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.

DECIDUOUS TREE PLANTING DETAIL (3)
NOT TO SCALE

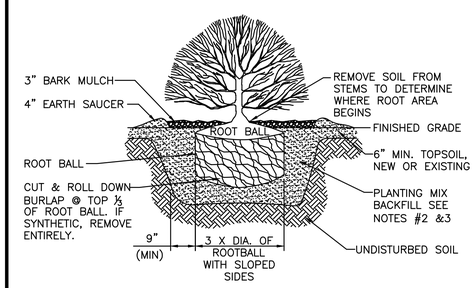


NOTE:
1. CONSTRUCTION FENCE TO BE "VISUAL BARRIER FENCE" AS MANUFACTURED BY EXXON CHEMICAL COMPANY ATLANTA, GA; "KONTROL SAFETY FENCE" AS MANUFACTURED BY MIRAFI, CHARLOTTE, N.C. OR APPROVED EQUAL.
2. IF GROUPS OF TREES ARE TO BE PROTECTED, EXTEND FENCE AROUND PERIMETER TO CONFORM TO MINIMUM DIMENSIONS FOR TREE TRUNKS AND DRIPLINE.



TEMP. CONST. FENCE / TREE PROTECTION (4)
NOT TO SCALE

NOTES:
1. ALL SHRUBS SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING. SET SHRUB 1"-2" ABOVE FINISH GRADE.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRHIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.
4. SHRUB BEDS TO HAVE 24" MIN. OF CONTINUOUS PLANTING SOIL.



SHRUB PLANTING DETAIL (5)
NOT TO SCALE

BETHANY C. DEMOOD
No. 4071
REGISTERED LANDSCAPE ARCHITECT
4-10-2020

REGISTERED LANDSCAPE ARCHITECT FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
882-892 MASSACHUSETTS AVE, LLC
452 MASSACHUSETTS AVE, STE 1
ARLINGTON, MA 02474

PROJECT:
892 MASSACHUSETTS AVE
ARLINGTON, MA 02476

PROJECT NO.	2729-01	DATE:	04-10-20
SCALE:	NTS	DWG. NAME:	C2729-01
DESIGNED BY:	BCD	CHECKED BY:	BDJ/RC

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
100 COMMERCE WAY, SUITE 5
WOBURN MA 01801
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DRAWING TITLE: LANDSCAPE DETAILS

SHEET No. L-501

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ALLEN & MAJOR ASSOCIATES, INC.

April 10, 2020

Jennifer Raitt
Director of Planning & Community Development
730 Massachusetts Ave
Arlington, MA 02476

RE: Mixed-Use Redevelopment
Drainage Summary Letter
882-892 Massachusetts Ave
Arlington, MA 02476

Dear Ms. Raitt,

On behalf of our Client, 882-892 Massachusetts Ave, LLC, Allen & Major Associates (A&M) is pleased to provide this letter in support of the Special Permit application for the Mixed-Use Redevelopment project at 882-892 Massachusetts Ave. This letter will summarize the changes to the stormwater management system which are proposed as part of the redevelopment efforts.

Existing Conditions

The site is located on the corner of Lockeland Avenue and Massachusetts Avenue with access to the parking area from Lockeland Avenue. It is comprised of two property's, identified on the City tax Map 126, Block 1, Lots 6 and 7. Lot 6 is predominantly covered by an existing 1-story brick building, approximately 4,786 square feet. Lot 7 is predominantly covered by paved parking area. Elevations onsite range from elevation 79 to elevation 80. Elevation 79 is the low point on-site located at the existing catch basin, and elevation 80 runs along the southern property line. Stormwater sheet flows from the paved parking lot to onsite to the existing catch basin which discharges to the existing municipal system via an 8" cast iron pipe. The majority of the stormwater from the site discharges through this connection including the roof drainage and parking lot. A review of the NRCS soil report for Middlesex County indicates that the soil onsite is considered Merrimac-Urban Land which has a Hydrologic Soil Group rating of an "A". A copy of the Existing Watershed Plan is included herewith.

Proposed Conditions

The project, proposes to demolish the existing structure to construct a 4-story, 4,693 square foot Mixed-Use building with apartment and retail uses. There are 22 apartment units proposed and a 750 square foot retail component. The parking area is proposed to be reconstructed within the constraints of the existing pavement area. The stormwater management system will be improved with the installation of a new catch basin with a sump and hood at the outlet pipe to provide stormwater treatment. The quantity of stormwater runoff will be reduced with the installation of landscaped areas on-site. The proposed work with result in approximately 1,470 square feet of impervious material being replaced with landscaped areas.

Runoff flows were estimated for both pre and post development conditions using HydroCAD 10.00 software, at two specific "Study Points" (SP-1 & SP-2). Study Point 1 is the flows that will enter the on-site catch basin and discharge to the municipal drainage system. Study Point 2 is the stormwater flows that will flow onto Massachusetts Ave, and be collected within the street catch basins. The table below shows that the project causes a reduction in the peak rate of runoff and volume of stormwater leaving the site at both Study Points. Copies of the HydroCAD worksheets and Watershed Plans are included herewith.

STUDY POINT #1 (flow to on-site catch basin)			
	2-Year	10-Year	100-Year
Existing Flow (CFS)	1.02	1.55	2.83
Proposed Flow (CFS)	0.92	1.47	2.79
Decrease (CFS)	**0.10**	**0.08**	**0.04**
Existing Volume (CF)	3,400	5,267	9,812
Proposed Volume (CF)	2,833	4,671	9,212
Decrease (CF)	**567**	**596**	**600**

STUDY POINT #2 (flow to Mass Ave)			
	2-Year	10-Year	100-Year
Existing Flow (CFS)	0.06	0.09	0.16
Proposed Flow (CFS)	0.01	0.03	0.08
Decrease (CFS)	**0.05**	**0.06**	**0.08**
Existing Volume (CF)	192	297	554
Proposed Volume (CF)	31	81	241
Decrease (CF)	**161**	**216**	**313**

The surface water drainage requirements of the Town of Arlington Zoning Bylaw Environmental Design Review Standards have been reviewed and met with the proposed design. The proposed project will introduce landscaped areas to the site to reduce the impervious area, and a new catch basin is proposed with a sump and hood at the outlet pipe to provide stormwater treatment. The Town of Arlington, Article 15 Stormwater Mitigation, shall not apply as the proposed development will introduce a reduction in impervious area. However, with the proposed landscaped areas the project will reduce the runoff rates for all design storms, and comply with this bylaw.

Summary

As shown in the table above, the proposed development will have a positive impact on the stormwater management system by reducing the rate and volume of stormwater runoff from the site.

Very truly yours,

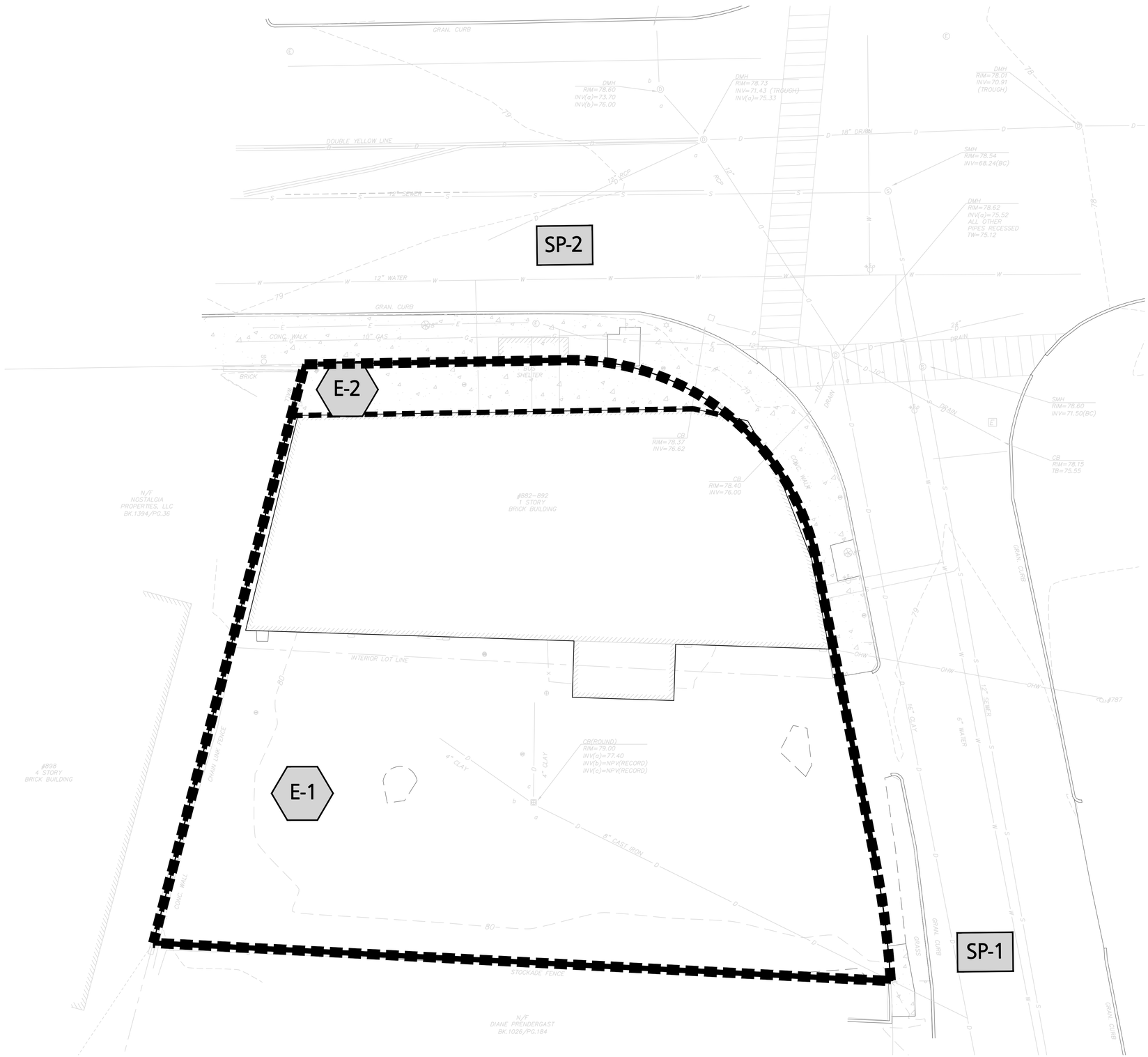
ALLEN & MAJOR ASSOCIATES, INC.

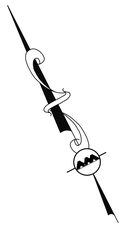
Aaron Mackey, PE
Project Engineer



Attachments:

1. Existing Watershed Plan
2. Proposed Watershed Plan
3. Pre development HydroCAD Calculations
4. Post development HydroCAD Calculations
5. Extreme Precipitation Tables
6. NRCS Soil Report





LEGEND

EXISTING WATERSHED	
SUBCATCHMENT BOUNDARY	
SUBCATCHMENT LABEL	E-1

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

REV	DATE	DESCRIPTION

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452 MASSACHUSETTS AVE, STE 1
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PREPARED BY:

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environmental consulting ◆ landscape architecture
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WOBURN MA 01801
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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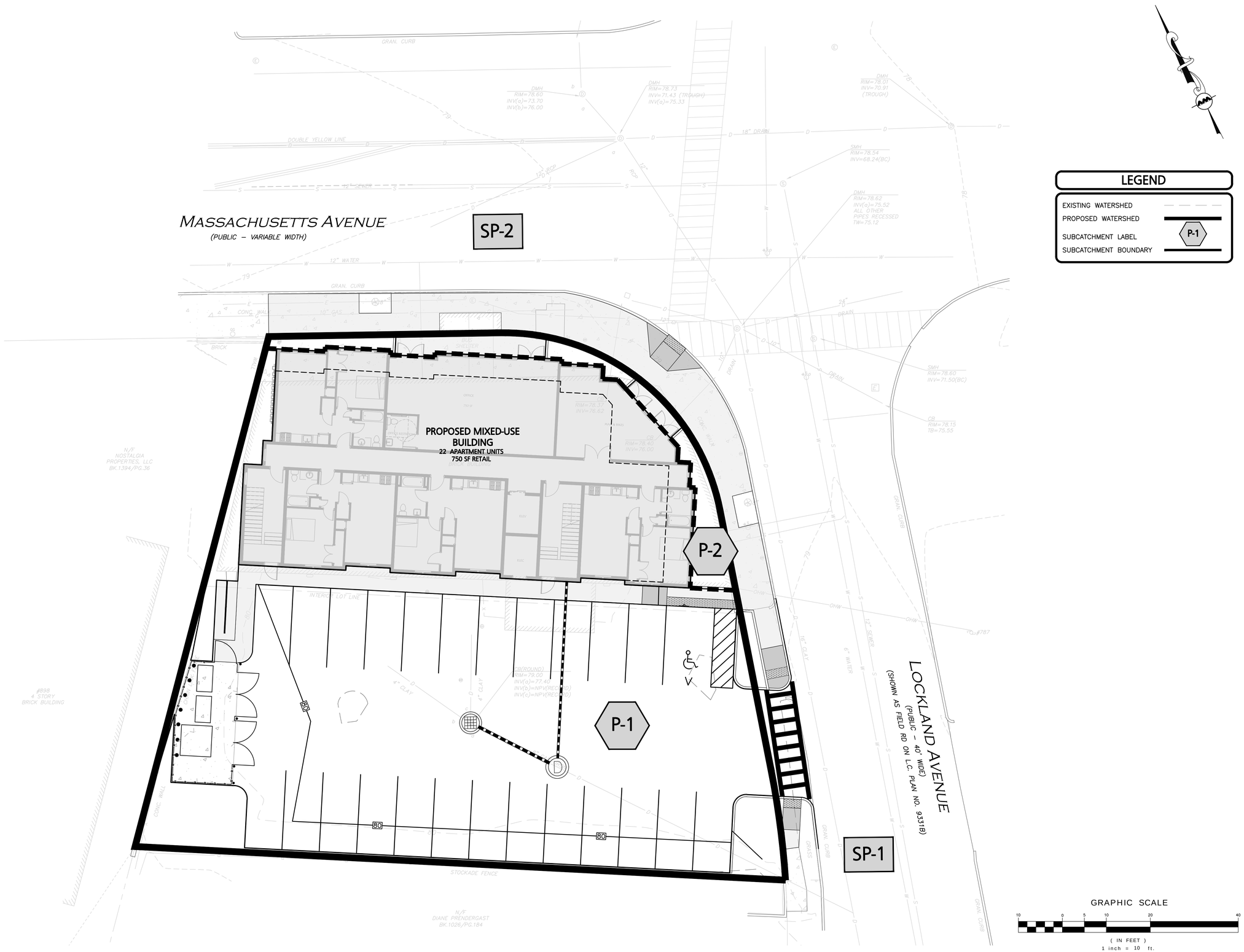
EXISTING WATERSHED PLAN

SHEET No.

EWP

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LEGEND

- EXISTING WATERSHED
- PROPOSED WATERSHED
- SUBCATCHMENT LABEL — P-1
- SUBCATCHMENT BOUNDARY

REV	DATE	DESCRIPTION

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PREPARED BY:

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environmental consulting ◆ landscape architecture
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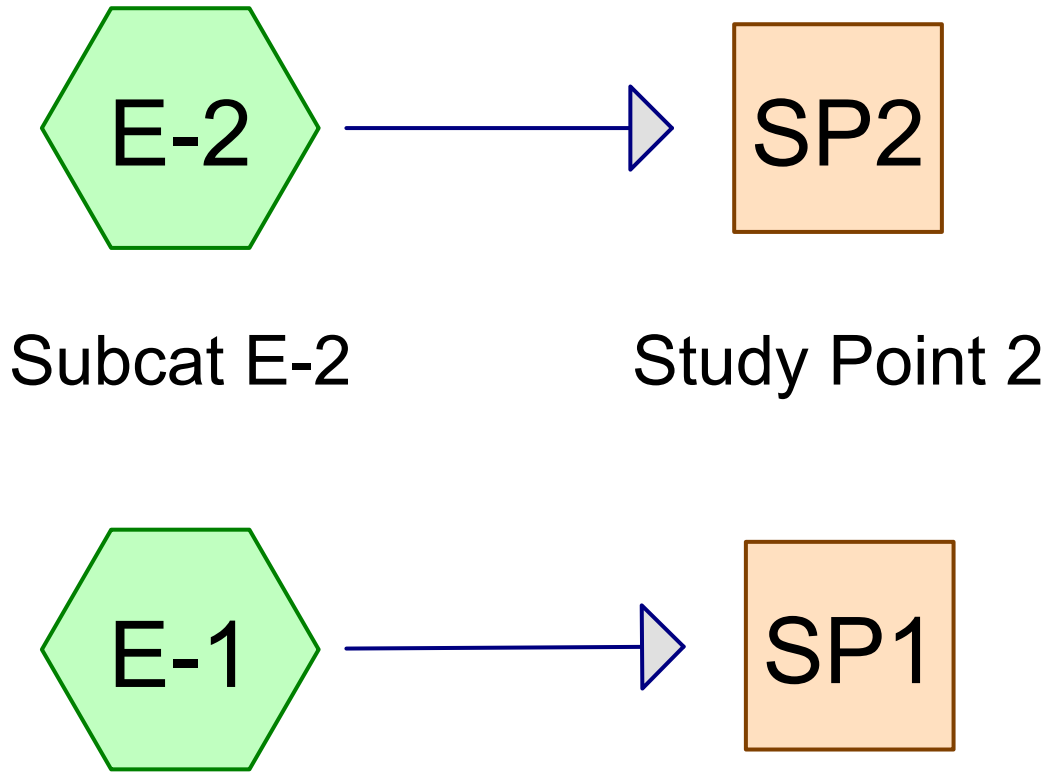
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DRAWING TITLE:	SHEET No.
PROPOSED WATERSHED PLAN	PWP

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Subcat Reach Pond Link

Routing Diagram for 2729-01_Existing-Conditions
Prepared by Allen & Major Associates Inc. , Printed 4/10/2020
HydroCAD® 10.00-24 s/n 02881 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
9,372	98	Paved parking, HSG A (E-1, E-2)
5,008	98	Roofs, HSG A (E-1)
14,381	**98**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
14,381	HSG A	E-1, E-2
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
14,381		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Subcatchment Numbers
9,372	0	0	0	0	9,372	Paved parking	E-1, E-2
5,008	0	0	0	0	5,008	Roofs	E-1
14,381	**0**	**0**	**0**	**0**	**14,381**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E-1: Subcat E-1 Runoff Area=13,613 sf 100.00% Impervious Runoff Depth=3.00"
Tc=5.0 min CN=98 Runoff=1.02 cfs 3,400 cf

Subcatchment E-2: Subcat E-2 Runoff Area=768 sf 100.00% Impervious Runoff Depth=3.00"
Tc=5.0 min CN=98 Runoff=0.06 cfs 192 cf

Reach SP1: Study Point 1 Inflow=1.02 cfs 3,400 cf
Outflow=1.02 cfs 3,400 cf

Reach SP2: Study Point 2 Inflow=0.06 cfs 192 cf
Outflow=0.06 cfs 192 cf

Total Runoff Area = 14,381 sf Runoff Volume = 3,592 cf Average Runoff Depth = 3.00"
0.00% Pervious = 0 sf 100.00% Impervious = 14,381 sf

Summary for Subcatchment E-1: Subcat E-1

Runoff = 1.02 cfs @ 12.07 hrs, Volume= 3,400 cf, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.23"

Area (sf)	CN	Description
8,604	98	Paved parking, HSG A
5,008	98	Roofs, HSG A
13,613	98	Weighted Average
13,613		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Subcatchment E-2: Subcat E-2

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 192 cf, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.23"

Area (sf)	CN	Description
768	98	Paved parking, HSG A
768		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Reach SP1: Study Point 1

Inflow Area = 13,613 sf,100.00% Impervious, Inflow Depth = 3.00" for 2-Year event
Inflow = 1.02 cfs @ 12.07 hrs, Volume= 3,400 cf
Outflow = 1.02 cfs @ 12.07 hrs, Volume= 3,400 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Summary for Reach SP2: Study Point 2

Inflow Area = 768 sf,100.00% Impervious, Inflow Depth = 3.00" for 2-Year event
Inflow = 0.06 cfs @ 12.07 hrs, Volume= 192 cf
Outflow = 0.06 cfs @ 12.07 hrs, Volume= 192 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E-1: Subcat E-1 Runoff Area=13,613 sf 100.00% Impervious Runoff Depth=4.64"
Tc=5.0 min CN=98 Runoff=1.55 cfs 5,267 cf

Subcatchment E-2: Subcat E-2 Runoff Area=768 sf 100.00% Impervious Runoff Depth=4.64"
Tc=5.0 min CN=98 Runoff=0.09 cfs 297 cf

Reach SP1: Study Point 1 Inflow=1.55 cfs 5,267 cf
Outflow=1.55 cfs 5,267 cf

Reach SP2: Study Point 2 Inflow=0.09 cfs 297 cf
Outflow=0.09 cfs 297 cf

Total Runoff Area = 14,381 sf Runoff Volume = 5,565 cf Average Runoff Depth = 4.64"
0.00% Pervious = 0 sf 100.00% Impervious = 14,381 sf

Summary for Subcatchment E-1: Subcat E-1

Runoff = 1.55 cfs @ 12.07 hrs, Volume= 5,267 cf, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.88"

Area (sf)	CN	Description
8,604	98	Paved parking, HSG A
5,008	98	Roofs, HSG A
13,613	98	Weighted Average
13,613		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Subcatchment E-2: Subcat E-2

Runoff = 0.09 cfs @ 12.07 hrs, Volume= 297 cf, Depth= 4.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.88"

Area (sf)	CN	Description
768	98	Paved parking, HSG A
768		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Reach SP1: Study Point 1

Inflow Area = 13,613 sf,100.00% Impervious, Inflow Depth = 4.64" for 10-Year event
Inflow = 1.55 cfs @ 12.07 hrs, Volume= 5,267 cf
Outflow = 1.55 cfs @ 12.07 hrs, Volume= 5,267 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Summary for Reach SP2: Study Point 2

Inflow Area = 768 sf,100.00% Impervious, Inflow Depth = 4.64" for 10-Year event
Inflow = 0.09 cfs @ 12.07 hrs, Volume= 297 cf
Outflow = 0.09 cfs @ 12.07 hrs, Volume= 297 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment E-1: Subcat E-1 Runoff Area=13,613 sf 100.00% Impervious Runoff Depth=8.65"
Tc=5.0 min CN=98 Runoff=2.83 cfs 9,812 cf

Subcatchment E-2: Subcat E-2 Runoff Area=768 sf 100.00% Impervious Runoff Depth=8.65"
Tc=5.0 min CN=98 Runoff=0.16 cfs 554 cf

Reach SP1: Study Point 1 Inflow=2.83 cfs 9,812 cf
Outflow=2.83 cfs 9,812 cf

Reach SP2: Study Point 2 Inflow=0.16 cfs 554 cf
Outflow=0.16 cfs 554 cf

Total Runoff Area = 14,381 sf Runoff Volume = 10,366 cf Average Runoff Depth = 8.65"
0.00% Pervious = 0 sf 100.00% Impervious = 14,381 sf

Summary for Subcatchment E-1: Subcat E-1

Runoff = 2.83 cfs @ 12.07 hrs, Volume= 9,812 cf, Depth= 8.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.89"

Area (sf)	CN	Description
8,604	98	Paved parking, HSG A
5,008	98	Roofs, HSG A
13,613	98	Weighted Average
13,613		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Subcatchment E-2: Subcat E-2

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 554 cf, Depth= 8.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.89"

Area (sf)	CN	Description
768	98	Paved parking, HSG A
768		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Reach SP1: Study Point 1

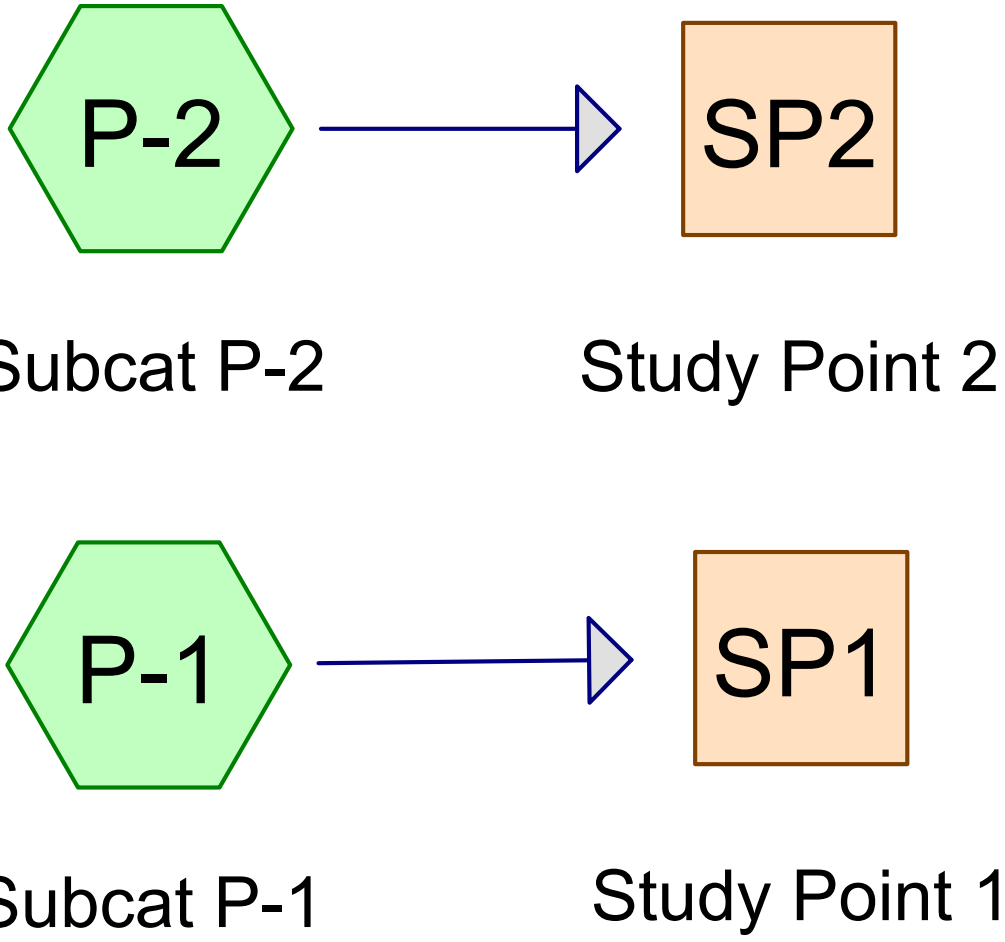
Inflow Area = 13,613 sf,100.00% Impervious, Inflow Depth = 8.65" for 100-Year event
Inflow = 2.83 cfs @ 12.07 hrs, Volume= 9,812 cf
Outflow = 2.83 cfs @ 12.07 hrs, Volume= 9,812 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Summary for Reach SP2: Study Point 2

Inflow Area = 768 sf,100.00% Impervious, Inflow Depth = 8.65" for 100-Year event
Inflow = 0.16 cfs @ 12.07 hrs, Volume= 554 cf
Outflow = 0.16 cfs @ 12.07 hrs, Volume= 554 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3


P-2
SP2
Subcat P-2
Study Point 2
P-1
SP1
Subcat P-1
Study Point 1

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,470	39	>75% Grass cover, Good, HSG A (P-1, P-2)
8,217	98	Paved parking, HSG A (P-1, P-2)
4,693	98	Roofs, HSG A (P-1)
14,381	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
14,381	HSG A	P-1, P-2
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
14,381		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Subcatchment Numbers
1,470	0	0	0	0	1,470	>75% Grass cover, Good	P-1, P-2
8,217	0	0	0	0	8,217	Paved parking	P-1, P-2
4,693	0	0	0	0	4,693	Roofs	P-1
14,381	**0**	**0**	**0**	**0**	**14,381**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P-1: Subcat P-1 Runoff Area=13,738 sf 92.26% Impervious Runoff Depth=2.47"
Tc=5.0 min CN=93 Runoff=0.92 cfs 2,833 cf

Subcatchment P-2: Subcat P-2 Runoff Area=643 sf 36.61% Impervious Runoff Depth=0.46"
Tc=5.0 min CN=61 Runoff=0.01 cfs 24 cf

Reach SP1: Study Point 1 Inflow=0.92 cfs 2,833 cf
Outflow=0.92 cfs 2,833 cf

Reach SP2: Study Point 2 Inflow=0.01 cfs 24 cf
Outflow=0.01 cfs 24 cf

Total Runoff Area = 14,381 sf Runoff Volume = 2,857 cf Average Runoff Depth = 2.38"
10.22% Pervious = 1,470 sf 89.78% Impervious = 12,910 sf

Summary for Subcatchment P-1: Subcat P-1

Runoff = 0.92 cfs @ 12.07 hrs, Volume= 2,833 cf, Depth= 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.23"

Area (sf)	CN	Description
7,982	98	Paved parking, HSG A
4,693	98	Roofs, HSG A
1,063	39	>75% Grass cover, Good, HSG A
13,738	93	Weighted Average
1,063		7.74% Pervious Area
12,675		92.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.01 cfs @ 12.11 hrs, Volume= 24 cf, Depth= 0.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Rainfall=3.23"

Area (sf)	CN	Description
408	39	>75% Grass cover, Good, HSG A
235	98	Paved parking, HSG A
643	61	Weighted Average
408		63.39% Pervious Area
235		36.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Reach SP1: Study Point 1

Inflow Area = 13,738 sf, 92.26% Impervious, Inflow Depth = 2.47" for 2-Year event
Inflow = 0.92 cfs @ 12.07 hrs, Volume= 2,833 cf
Outflow = 0.92 cfs @ 12.07 hrs, Volume= 2,833 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Summary for Reach SP2: Study Point 2

Inflow Area = 643 sf, 36.61% Impervious, Inflow Depth = 0.46" for 2-Year event
Inflow = 0.01 cfs @ 12.11 hrs, Volume= 24 cf
Outflow = 0.01 cfs @ 12.11 hrs, Volume= 24 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P-1: Subcat P-1 Runoff Area=13,738 sf 92.26% Impervious Runoff Depth=4.08"
Tc=5.0 min CN=93 Runoff=1.47 cfs 4,671 cf

Subcatchment P-2: Subcat P-2 Runoff Area=643 sf 36.61% Impervious Runoff Depth=1.30"
Tc=5.0 min CN=61 Runoff=0.02 cfs 70 cf

Reach SP1: Study Point 1 Inflow=1.47 cfs 4,671 cf
Outflow=1.47 cfs 4,671 cf

Reach SP2: Study Point 2 Inflow=0.02 cfs 70 cf
Outflow=0.02 cfs 70 cf

Total Runoff Area = 14,381 sf Runoff Volume = 4,740 cf Average Runoff Depth = 3.96"
10.22% Pervious = 1,470 sf 89.78% Impervious = 12,910 sf

Summary for Subcatchment P-1: Subcat P-1

Runoff = 1.47 cfs @ 12.07 hrs, Volume= 4,671 cf, Depth= 4.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.88"

Area (sf)	CN	Description
7,982	98	Paved parking, HSG A
4,693	98	Roofs, HSG A
1,063	39	>75% Grass cover, Good, HSG A
13,738	93	Weighted Average
1,063		7.74% Pervious Area
12,675		92.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.02 cfs @ 12.08 hrs, Volume= 70 cf, Depth= 1.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.88"

Area (sf)	CN	Description
408	39	>75% Grass cover, Good, HSG A
235	98	Paved parking, HSG A
643	61	Weighted Average
408		63.39% Pervious Area
235		36.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Reach SP1: Study Point 1

Inflow Area = 13,738 sf, 92.26% Impervious, Inflow Depth = 4.08" for 10-Year event
Inflow = 1.47 cfs @ 12.07 hrs, Volume= 4,671 cf
Outflow = 1.47 cfs @ 12.07 hrs, Volume= 4,671 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Summary for Reach SP2: Study Point 2

Inflow Area = 643 sf, 36.61% Impervious, Inflow Depth = 1.30" for 10-Year event
Inflow = 0.02 cfs @ 12.08 hrs, Volume= 70 cf
Outflow = 0.02 cfs @ 12.08 hrs, Volume= 70 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment P-1: Subcat P-1 Runoff Area=13,738 sf 92.26% Impervious Runoff Depth=8.05"
Tc=5.0 min CN=93 Runoff=2.79 cfs 9,212 cf

Subcatchment P-2: Subcat P-2 Runoff Area=643 sf 36.61% Impervious Runoff Depth=4.14"
Tc=5.0 min CN=61 Runoff=0.07 cfs 222 cf

Reach SP1: Study Point 1 Inflow=2.79 cfs 9,212 cf
Outflow=2.79 cfs 9,212 cf

Reach SP2: Study Point 2 Inflow=0.07 cfs 222 cf
Outflow=0.07 cfs 222 cf

Total Runoff Area = 14,381 sf Runoff Volume = 9,433 cf Average Runoff Depth = 7.87"
10.22% Pervious = 1,470 sf 89.78% Impervious = 12,910 sf

Summary for Subcatchment P-1: Subcat P-1

Runoff = 2.79 cfs @ 12.07 hrs, Volume= 9,212 cf, Depth= 8.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.89"

Area (sf)	CN	Description
7,982	98	Paved parking, HSG A
4,693	98	Roofs, HSG A
1,063	39	>75% Grass cover, Good, HSG A
13,738	93	Weighted Average
1,063		7.74% Pervious Area
12,675		92.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.07 cfs @ 12.08 hrs, Volume= 222 cf, Depth= 4.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Rainfall=8.89"

Area (sf)	CN	Description
408	39	>75% Grass cover, Good, HSG A
235	98	Paved parking, HSG A
643	61	Weighted Average
408		63.39% Pervious Area
235		36.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry, Assumed**

Summary for Reach SP1: Study Point 1

Inflow Area = 13,738 sf, 92.26% Impervious, Inflow Depth = 8.05" for 100-Year event
Inflow = 2.79 cfs @ 12.07 hrs, Volume= 9,212 cf
Outflow = 2.79 cfs @ 12.07 hrs, Volume= 9,212 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Summary for Reach SP2: Study Point 2

Inflow Area = 643 sf, 36.61% Impervious, Inflow Depth = 4.14" for 100-Year event
Inflow = 0.07 cfs @ 12.08 hrs, Volume= 222 cf
Outflow = 0.07 cfs @ 12.08 hrs, Volume= 222 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 3

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	Massachusetts
Location	
Longitude	71.164 degrees West
Latitude	42.417 degrees North
Elevation	0 feet
Date/Time	Wed, 22 Jan 2020 13:40:55 -0500

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.70	0.87	1.10	**1yr**	0.75	1.04	1.28	1.63	2.08	2.68	2.92	**1yr**	2.37	2.81	3.27	3.96	4.64	**1yr**
2yr	0.35	0.54	0.67	0.88	1.11	1.40	**2yr**	0.96	1.28	1.62	2.03	2.56	3.23	3.57	**2yr**	2.85	3.44	3.94	4.68	5.34	**2yr**
5yr	0.41	0.64	0.81	1.08	1.39	1.77	**5yr**	1.20	1.60	2.05	2.59	3.25	4.08	4.55	**5yr**	3.61	4.37	4.99	5.95	6.68	**5yr**
10yr	0.47	0.73	0.93	1.26	1.64	2.11	**10yr**	1.42	1.90	2.46	3.11	3.90	4.88	5.45	**10yr**	4.32	5.25	5.97	7.14	7.91	**10yr**
25yr	0.56	0.88	1.12	1.55	2.05	2.66	**25yr**	1.77	2.39	3.12	3.95	4.96	6.19	6.95	**25yr**	5.48	6.68	7.57	9.09	9.91	**25yr**
50yr	0.63	1.01	1.29	1.81	2.44	3.20	**50yr**	2.10	2.85	3.76	4.76	5.97	7.42	8.35	**50yr**	6.56	8.03	9.07	10.91	11.75	**50yr**
100yr	0.72	1.17	1.51	2.13	2.90	3.82	**100yr**	2.50	3.39	4.50	5.71	7.16	8.89	10.03	**100yr**	7.86	9.65	10.86	13.10	13.95	**100yr**
200yr	0.83	1.35	1.74	2.50	3.45	4.57	**200yr**	2.97	4.03	5.40	6.86	8.59	10.65	12.07	**200yr**	9.42	11.60	13.02	15.73	16.56	**200yr**
500yr	1.00	1.64	2.14	3.10	4.34	5.80	**500yr**	3.74	5.08	6.86	8.74	10.94	13.54	15.41	**500yr**	11.98	14.82	16.54	20.06	20.78	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.38	0.46	0.62	0.76	0.84	**1yr**	0.66	0.83	1.14	1.43	1.77	2.41	2.48	**1yr**	2.14	2.38	2.92	3.52	4.01	**1yr**
2yr	0.33	0.51	0.63	0.85	1.05	1.26	**2yr**	0.91	1.23	1.44	1.91	2.47	3.12	3.45	**2yr**	2.76	3.32	3.80	4.52	5.17	**2yr**
5yr	0.39	0.60	0.74	1.02	1.30	1.50	**5yr**	1.12	1.47	1.72	2.24	2.87	3.75	4.15	**5yr**	3.32	3.99	4.57	5.45	6.14	**5yr**
10yr	0.43	0.67	0.82	1.15	1.49	1.72	**10yr**	1.28	1.68	1.94	2.52	3.23	4.32	4.80	**10yr**	3.83	4.61	5.24	6.25	7.00	**10yr**
25yr	0.50	0.76	0.95	1.35	1.78	2.04	**25yr**	1.53	1.99	2.29	2.95	3.76	5.19	5.78	**25yr**	4.59	5.56	6.29	7.47	8.28	**25yr**
50yr	0.55	0.84	1.05	1.51	2.03	2.34	**50yr**	1.75	2.29	2.60	3.33	4.23	5.94	6.65	**50yr**	5.26	6.39	7.20	8.51	9.40	**50yr**
100yr	0.62	0.93	1.17	1.69	2.32	2.66	**100yr**	2.00	2.60	2.94	3.61	4.75	6.83	7.64	**100yr**	6.04	7.35	8.26	9.67	10.68	**100yr**
200yr	0.69	1.04	1.32	1.92	2.67	3.04	**200yr**	2.31	2.97	3.34	4.04	5.35	7.83	8.79	**200yr**	6.93	8.45	9.46	10.96	12.10	**200yr**
500yr	0.81	1.21	1.55	2.25	3.21	3.62	**500yr**	2.77	3.54	3.93	4.69	6.27	9.39	10.55	**500yr**	8.31	10.15	11.32	12.90	14.25	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.31	0.48	0.58	0.79	0.97	1.13	**1yr**	0.83	1.11	1.32	1.76	2.25	2.86	3.16	**1yr**	2.53	3.04	3.51	4.30	5.03	**1yr**
2yr	0.36	0.56	0.69	0.93	1.15	1.36	**2yr**	0.99	1.33	1.57	2.07	2.67	3.35	3.73	**2yr**	2.97	3.59	4.10	4.88	5.54	**2yr**
5yr	0.45	0.69	0.86	1.18	1.50	1.78	**5yr**	1.30	1.74	2.05	2.65	3.37	4.44	5.00	**5yr**	3.93	4.81	5.43	6.47	7.22	**5yr**
10yr	0.55	0.84	1.04	1.45	1.88	2.19	**10yr**	1.62	2.14	2.54	3.20	4.04	5.52	6.25	**10yr**	4.89	6.01	6.74	8.04	8.84	**10yr**
25yr	0.71	1.08	1.34	1.92	2.52	2.89	**25yr**	2.18	2.82	3.37	4.13	5.14	7.34	8.43	**25yr**	6.50	8.11	8.96	10.76	11.58	**25yr**
50yr	0.86	1.31	1.63	2.34	3.15	3.57	**50yr**	2.72	3.49	4.17	5.02	6.17	9.12	10.57	**50yr**	8.07	10.16	11.11	13.43	14.21	**50yr**
100yr	1.05	1.59	1.99	2.87	3.94	4.39	**100yr**	3.40	4.30	5.18	6.33	7.40	11.34	13.27	**100yr**	10.04	12.76	13.79	16.80	17.48	**100yr**
200yr	1.28	1.92	2.44	3.53	4.92	5.43	**200yr**	4.25	5.30	6.43	7.72	8.88	14.11	16.67	**200yr**	12.49	16.03	17.14	21.02	21.51	**200yr**
500yr	1.67	2.48	3.19	4.63	6.59	7.15	**500yr**	5.69	6.99	8.57	10.06	11.30	18.86	22.55	**500yr**	16.69	21.69	22.82	28.32	28.35	**500yr**

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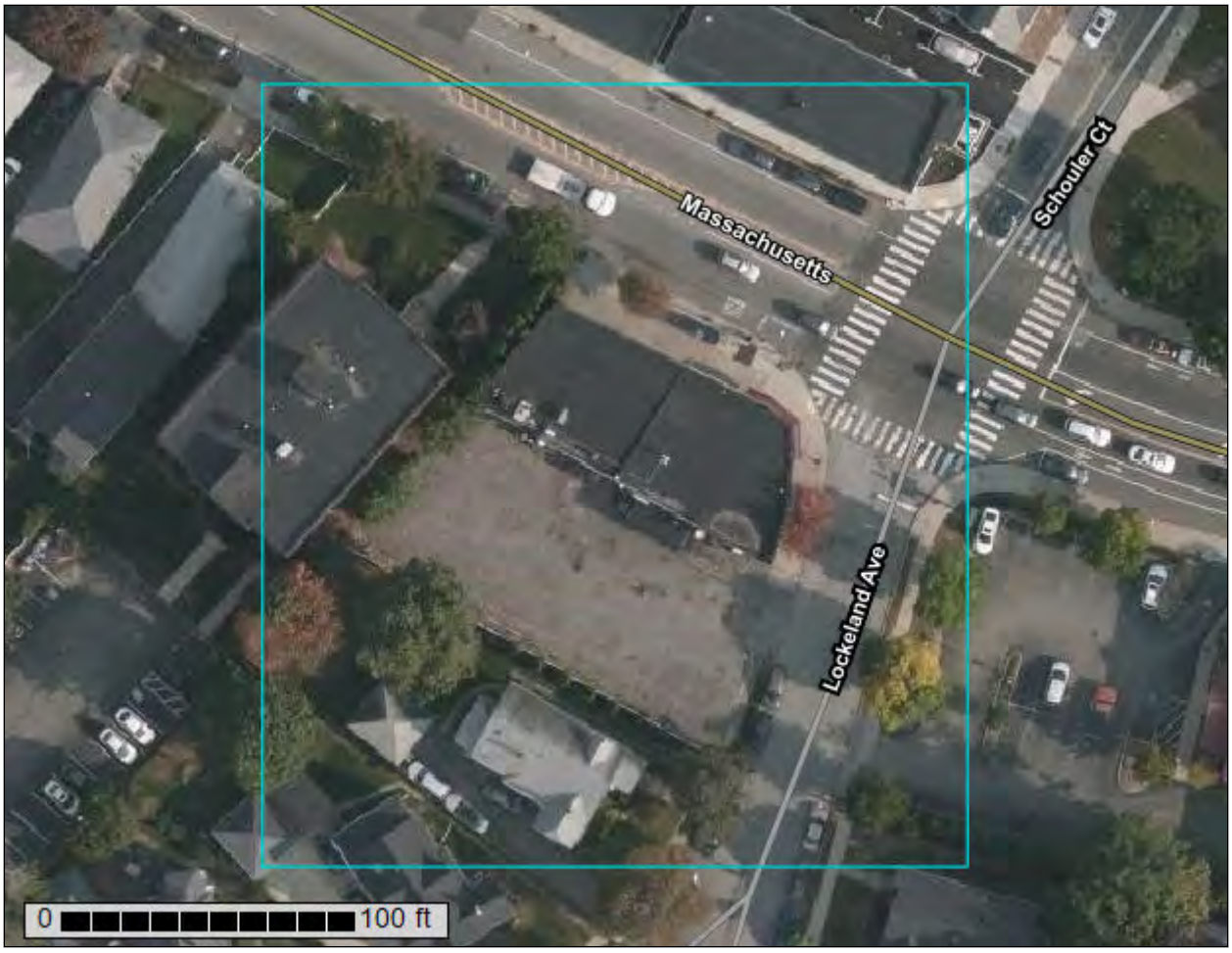
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Middlesex County, Massachusetts



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

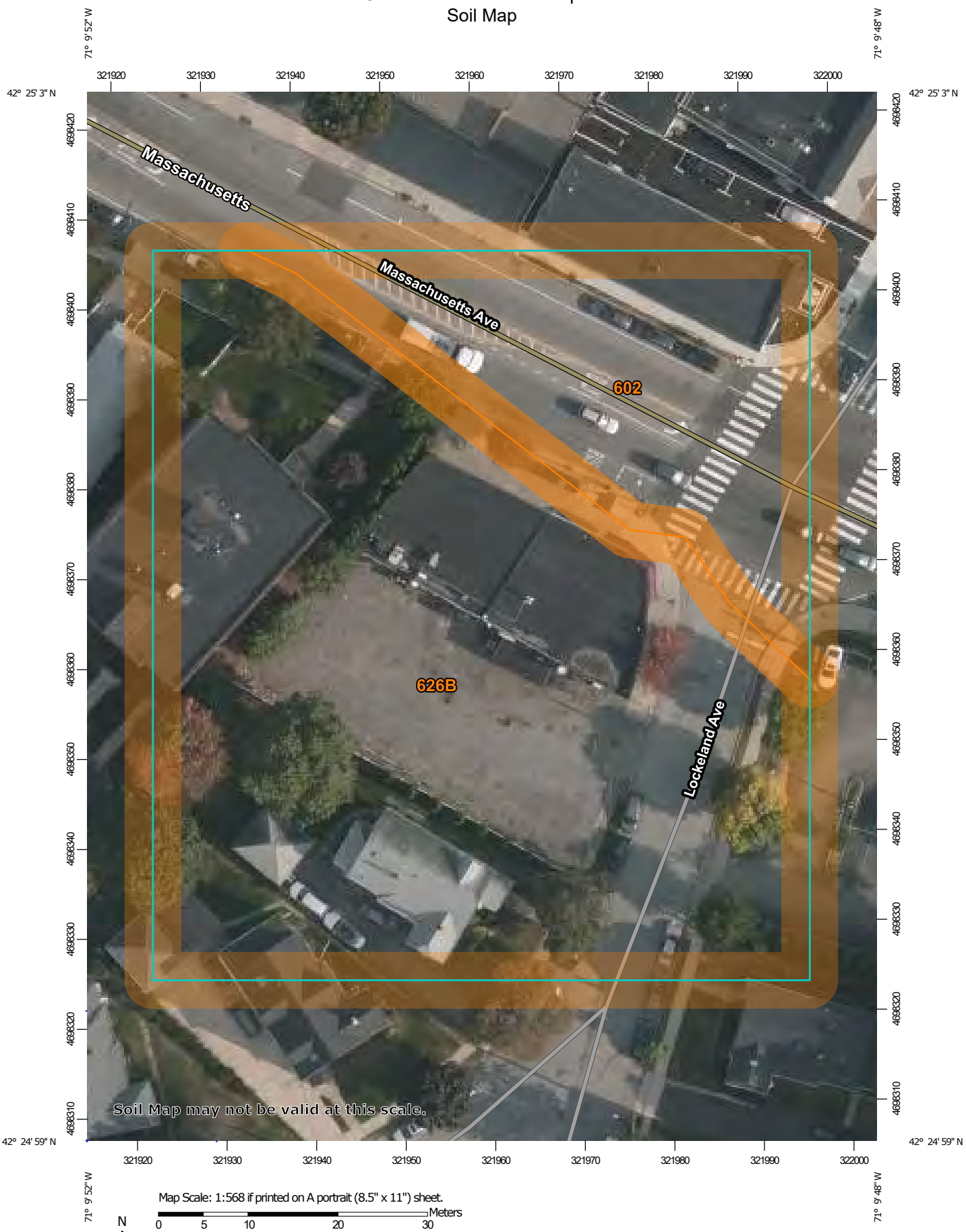
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:568 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 19, Sep 12, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 11, 2019—Oct 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
602	Urban land	0.3	23.4%
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	1.1	76.6%
Totals for Area of Interest		**1.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Middlesex County, Massachusetts

602—Urban land

Map Unit Setting

National map unit symbol: 9950
Elevation: 0 to 3,000 feet
Mean annual precipitation: 32 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 110 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Excavated and filled land

Minor Components

Rock outcrop

Percent of map unit: 5 percent
Landform: Ledges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Concave

Udorthents, wet substratum

Percent of map unit: 5 percent
Hydric soil rating: No

Udorthents, loamy

Percent of map unit: 5 percent
Hydric soil rating: No

626B—Merrimac-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyr9
Elevation: 0 to 820 feet
Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 45 percent
Urban land: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Moraines, outwash plains, kames, eskers, outwash terraces
Landform position (two-dimensional): Backslope, footslope, summit, shoulder
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Salinity, maximum in profile: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Available water storage in profile: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Windsor

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, dunes, outwash terraces
Landform position (three-dimensional): Riser, tread
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Terraces, deltas, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, outwash plains, kames, eskers
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, crest, head slope, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Physical Properties

Soil Physical Properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

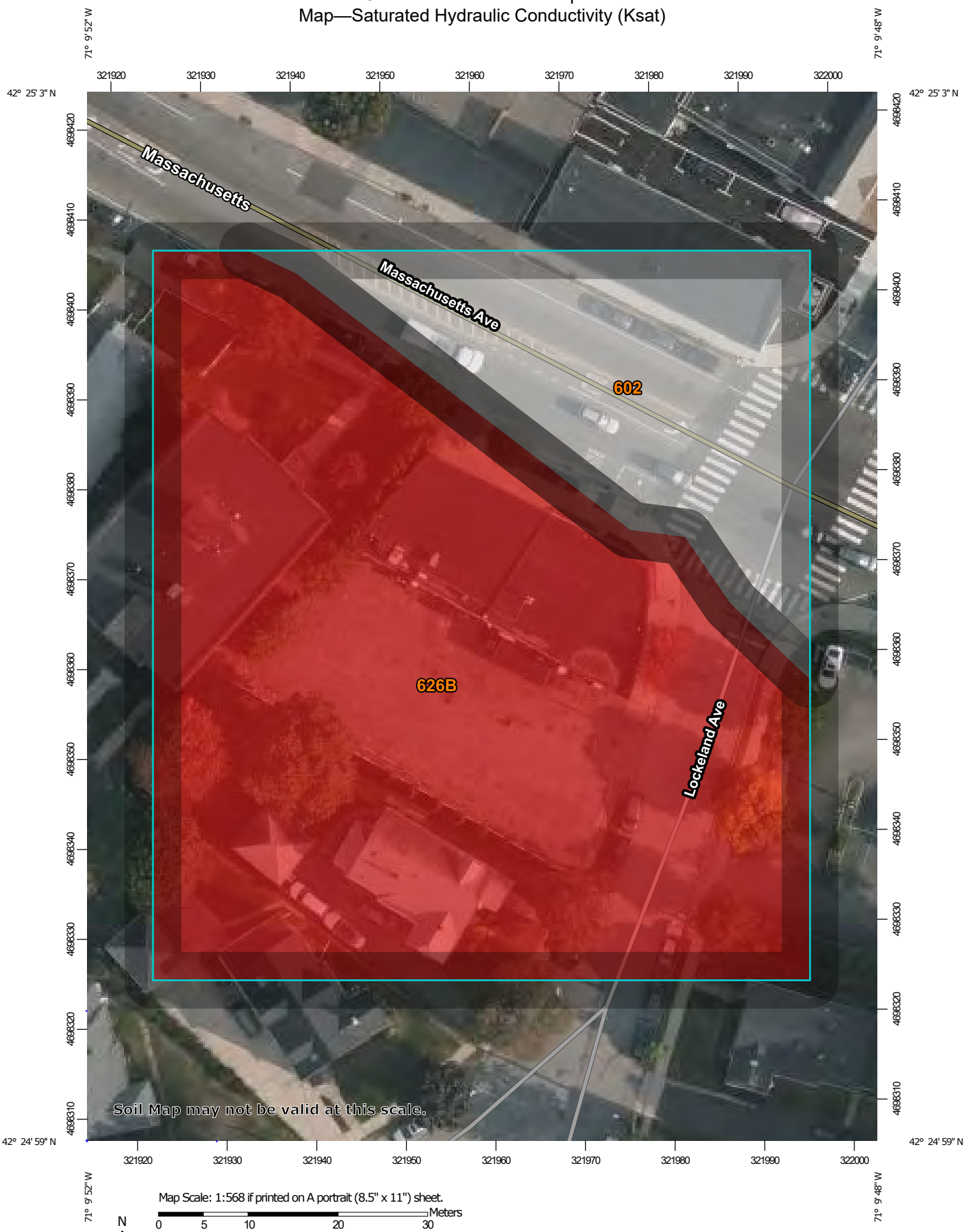
Saturated Hydraulic Conductivity (Ksat)

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Map—Saturated Hydraulic Conductivity (Ksat)



Map Scale: 1:568 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

= 100.0000

Not rated or not available

Soil Rating Lines

= 100.0000

Not rated or not available

Soil Rating Points

= 100.0000

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 19, Sep 12, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 11, 2019—Oct 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Saturated Hydraulic Conductivity (Ksat)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
602	Urban land		0.3	23.4%
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	100.0000	1.1	76.6%
Totals for Area of Interest			**1.5**	**100.0%**

Rating Options—Saturated Hydraulic Conductivity (Ksat)

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 24

Bottom Depth: 90

Units of Measure: Centimeters

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

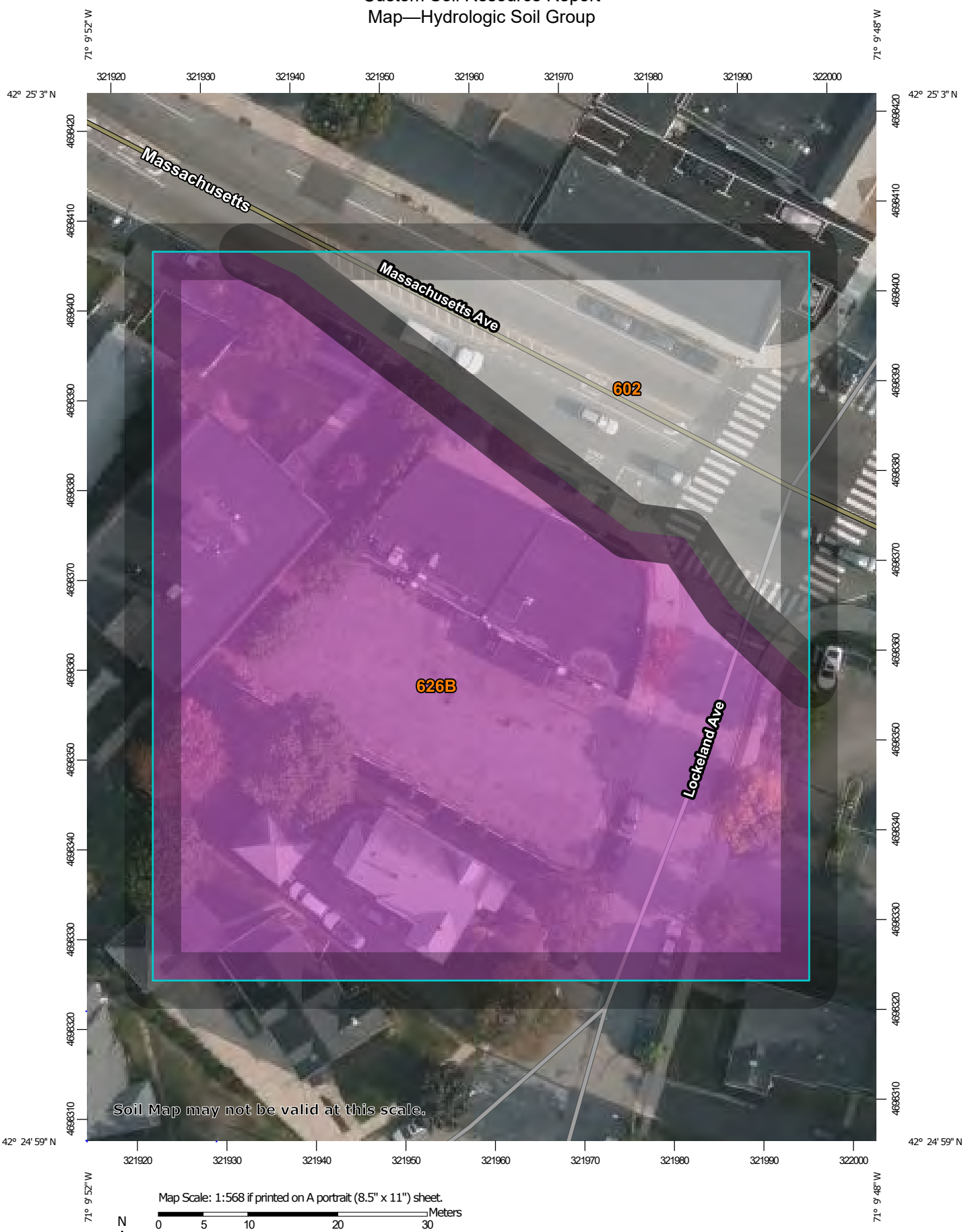
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



Map Scale: 1:568 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 5 10 20 30

Feet
0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 19, Sep 12, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 11, 2019—Oct 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
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626B	Merrimac-Urban land complex, 0 to 8 percent slopes	A	1.1	76.6%
Totals for Area of Interest			**1.5**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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ROBERT J. ANNESE
ATTORNEY AT LAW

April 16, 2020

VIA FEDEX

Jennifer Raitt, Director
Department of Planning and Community Development
Town of Arlington
730 Massachusetts Avenue
Arlington, MA 02476

RE: 882-892 Massachusetts Avenue

Dear Ms. Raitt and Ms. Zwirko:

I am sending along an Application for Environment Review filed in behalf of 882-892 Massachusetts Ave, LLC, the owner of real estate located at 882-892 Massachusetts Avenue, Arlington.

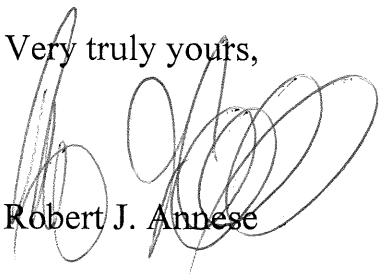
I am also sending along a check in the amount of $4,975.00 representing the filing fee based upon a calculation of $500.00 plus $0.20 per square foot of the new construction of 22,375 square feet.

This Application is being filed both digitally and I am sending three (3) hard copies to your office by FedEx as well (two separate FedEx boxes).

Would you please let me know the date the Application will be heard by the ARB.

Thank you for your cooperation.

Very truly yours,



Robert J. Annese

Enclosures

1171 MASSACHUSETTS AVENUE • ARLINGTON, MASSACHUSETTS 02476 • TELEPHONE 781-646-4911 • FAX 781-646-4910
E-MAIL ADDRESS: LAW@ROBERTANNESE.COM

Phase III - Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives

882-892 Mass. Ave
Arlington, Massachusetts

MassDEP RTN: 3-0031392

AECOM Project Number 60615154

April 2020

Quality information

Prepared by	Prepared and Approved by
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882-892 Massachusetts Avenue LLC

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Appendix B Preliminary cost estimates for implementing each RAA
Appendix C Greener Cleanup Evaluation
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1. Introduction

Pursuant to section 310 40.0850 of the Massachusetts Contingency Plan (MCP), AECOM Technical Services, Inc. (AECOM) is submitting this Phase III Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives Report (Phase III Report) for the site that encompasses a portion of the property located at 882-892 Massachusetts Avenue, Arlington, Massachusetts ("property"). The Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 3-31392 (and linked RTN 3-31723) apply to this disposal site ("site"). Attached **Figure 1** depicts the site location and **Figure 2** is a site plan.

AECOM was contracted in January 2020 to complete this Phase III Report. The site Responsible Party (RP), 882-892 Massachusetts Avenue LLC, executed an Administrative Consent Order (ACO) with MassDEP in December 2019. This MCP submittal meets the ACO requirement for a Phase III Report by April 30, 2020. On April 9, 2020, a Tier Classification Extension Submittal and Ownership/RP Transfer was submitted to MassDEP per the ACO.

All previous MCP work has been conducted by Lord Associates, Inc. The last MCP phase report submitted for the site, was a Revised Phase II Comprehensive Site Assessment and Immediate Response Action Completion Statement Report dated April 26, 2018 ("Phase II Report"). For this Phase III report, AECOM relies on data collected by Lord Associates, Inc. and others for the site and site vicinity. The owner of the property which encompasses the site is having plans prepared for municipal approval and working to arrange financing to demolish and remove the existing one-story commercial building at the site and construct a new building; which if that project goes forward would open access to the subsurface and area of highest impacts delineated to date. This Phase III Report and the selected remedial alternatives relies on the assumption that this project will go forward, and the ACO deadlines with MassDEP were negotiated with this in mind. Lastly, because of the removal of the existing building, recommended additional remedial investigations will be possible to facilitate the final design or feasibility study of the selected remedial alternative.

This Phase III Report is being submitted to MassDEP via eDEP with Transmittal Form BWSC-108, signed by Licensed Site Professional Mr. David Austin (#2062) and the RP.

2. Site Description, Release History, and Summary of Site Investigations and Remedial Actions

The site encompasses a portion of the property (882-892 Massachusetts Avenue, in Arlington, Massachusetts), which is currently an approximately 4,550 square foot commercial and office space building located on 0.147 acres. The Universal Transverse Mercator coordinates for the approximate center of the subject property are 4698379 meters north, and 321966 meters east. The site also includes a portion of Massachusetts Avenue to the north based upon Figure 2 of the Lord Associates, Inc. Phase II Report. In addition, Downgradient Property Status (DPS) filings have been submitted for properties north and east of the site. The DPS conclusion provided for 880 Massachusetts Avenue is refuted by Lord Associates, Inc. in the Phase II Report. The site is the current total area that has been impacted by the release of chlorinated hydrocarbons at the property, including perchloroethene (PCE) and trichloroethene (TCE), in the absence of other possible sources.

According to the Town of Arlington Assessor's office, the existing building at the property was constructed about 1910; however, the building does not appear on a 1923 Sanborn Fire Insurance Map according to the Lord Associates, Inc. Phase II Report. And it does appear on the 1927 Sanborn Map in its apparent current configuration with the exception of a small building extension to the south; the south side foundation and building appears on the 1973 Sanborn Map. The buildings at the property have always been used for commercial/retail or office use. According to the current owners (882-892 Massachusetts Avenue LLC), the property was purchased by the Fragio Realty Trust in 1964 (additional property history information is contained in the Phase II Report). Attached **Figure 2** depicts the building, property lines within the disposal site boundary, roadways, subsurface utilities, and soil vapor point/test boring/groundwater monitoring well locations used for site assessment and remedial work to date.

The site and property are located in an urban residential and commercial area of Arlington zoned B2 and is currently occupied by a commercial building comprised of five separate units including: Thai Kitchen Restaurant (882A Massachusetts Ave); 882B Massachusetts Ave. (currently vacant); Food Link at 888 Massachusetts Ave.; Toraya Japanese Restaurant (890 Massachusetts Ave.); and Arlington Community Media (892 Massachusetts Ave.). The land uses surrounding the property and site are primarily residential to the south and west. A former gasoline service station, now a commercial and residential property is located across Massachusetts Avenue to the north, and a printing shop (Arlington Lithography, Inc.) is located behind that property at 6 Schouler Court. An TD Bank business, that was the site of a former Sunoco gasoline service station is located across Lockeland Avenue to the east. The Arlington High School is located further east-northeast diagonally across Massachusetts Avenue.

The site and vicinity are generally level, based on site inspections and the topographic map, and there is a gentle slope to the east, and a rise to the south. According to the Phase II Report, surface water runoff has been observed to flow towards catch basins located in Massachusetts Avenue. The site and property are estimated to be approximately 80 feet above sea level.

As reported in the Phase II Report, according to the 2000 Massachusetts Census, as supplied by MassGIS, the estimated population density within half a mile from the site is greater than 1,000 people. Potential human receptors include employees and visitors of the building at the site, and children may be present under high frequency, but low intensity uses. The property and portion of site within Massachusetts Avenue are entirely paved or covered by a building. Therefore, soil is currently categorized as S-2 or S-3 per the MCP.

The foreseeable land use in the area of the site is expected to remain as commercial and residential (multi-unit buildings). Other than the Arlington High School, there are no known institutions within 500 feet of the property. Additionally, there are no surface waters, Areas of Critical Environmental Concern, fish habitats, and habitats of Species of Special Concern or Threatened or Endangered Species within 500 feet of the site as reported in the

Phase II Report. Relative to drinking water supplies, the site does not exist in a Zone II area, an Interim Wellhead Protection Area, or a Zone A area. According to the Town of Arlington, there are no known private water wells within 500 feet of the site as reported in the Phase II Report. Average depth to groundwater at the site is approximately 15-25 feet below grade; therefore, the groundwater at the site is categorized as GW-3. An area of protected open space exists approximately 300 feet to the south and 500 feet to the north of the site. A MassGIS Priority Resource Map is provided as Figure 3 in the Phase II Report.

2.1 Site Release History

As reported in the Phase II Report, in August of 2011, MassDEP undertook a series of investigative efforts at and near the Arlington High School located at 869 Massachusetts Avenue as the result of the finding of an industrial solvent, PCE in groundwater and indoor air near the school. The investigation included several nearby properties located across Massachusetts Avenue including a former Sunoco service station at 880 Massachusetts Avenue (currently a TD Bank branch), and the property at 882-892 Massachusetts Avenue that was formerly occupied by Arlington Tailors and Cleaning which used and stored PCE. In August 2012, MassDEP installed soil vapor monitoring points in the front sidewalk area of the site along Massachusetts Avenue (see Figure 2). Concentrations of PCE and other related chlorinated hydrocarbons were detected in the soil gas. MassDEP issued a Notice of Responsibility letter (NOR) to the Fragio Realty Trust (which previously had transferred its interest in the property to the Pasciuto Family Series LLC, the previous property owner) on February 21, 2013 and assigned the site RTN 3-31392. In the NOR, MassDEP summarized the results of a groundwater elevation survey that depicted groundwater flow at the Lockeland Avenue and 882-892 Massachusetts Avenue area as travelling in a north to northeast direction, towards the Arlington High School.

During May of 2013, additional soil vapor points were installed underneath the site building. The results of that testing identified concentrations of PCE and other related chlorinated hydrocarbons in the soil gas exceeding the sub slab screening levels published by MassDEP for potential vapor intrusion conditions. The PCE concentrations ranged from 14,000 micrograms per cubic meters (ug/m^3) to 124,000 ug/ m^3 under Arlington Tailors. Based upon these results, MassDEP issued Fragio Realty Trust a Notice of Need to Conduct an IRA on June 11, 2013. The required IRA actions included the testing of both soil gas and indoor air to determine if a complete vapor intrusion pathway was present at the site building (882-892 Massachusetts Avenue). On July 12, 2013, MassDEP issued Fragio Realty Trust a Modification to Requirements of IRAs and Request for Extension to Interim Deadlines letter. The letter stated that MassDEP approved the evaluation of a sub slab depressurization system (SSD) or soil vapor extraction system (SVE) in lieu of and/or in addition to the requested soil vapor and indoor air testing, and an extension to the July 11, 2013 interim deadline for the completion date was set at August 12, 2013.

During July and September 2013, the following was completed by Lord Associates, Inc.:

- Met with contractor concerning the design and installation of the SSD system.
- Collected 24-hour composite samples from the upstairs at each of the four units at the site building for analyses by EPA Method TO-15 for VOCs and provided the results to MassDEP in accordance with the Interim deadline set for initial testing. The results indicated that PCE was present in indoor air at concentrations exceeding the MassDEP Threshold Values for commercial settings and Lord Associates, Inc. stated that additional assessment would be required to evaluate the risk it presented to human health.
- The SSD system installations were completed between August 2 and 5, 2013, followed by system testing and sampling.
- MassDEP concluded, based on their review of the initial indoor air testing, that the levels of PCE in indoor air at two of the units (Arlington Media and Toyaya Restaurant) represented Imminent Hazards and assigned a second RTN (3-31723) on August 22, 2013. As reported in the Phase II Report, because of the presence of the functioning SSD systems, it was opined that the source of vapor intrusion into the building was not from any PCE release into the environment, but was more likely due to the presence of stored PCE in the Arlington Tailors. Therefore, the following was completed: removal of all PCE being stored in the building; increasing the fresh air makeup of each unit; additional assessment of the SSD systems and site conditions; and deploying air purification units at both Arlington Media and Toyaya Restaurant (it is assumed that this corrected the situation).

In a letter dated March 26, 2014, MassDEP conditionally approved a Phase II Work Plan and established interim deadlines to complete additional assessment work. Since that date, Lord Associates, Inc. completed multiple sampling events and implemented an IRA Plan to perform a program of In-Situ Chemical Oxidation (ISCO). The details of those response actions are provided in the following sections.

Multiple MCP submittals summarizing assessment and remedial work were filed with MassDEP by Lord Associates, Inc. starting in September 2013 with a Phase I Report and Tier Classification submittal and IRA Plan, followed by IRA Status Reports, Phase II Report and IRA Completion (January 2018), Revised Phase II Report and IRA Completion (April 2018), Tier Classification Extension (December 2018), and Notice of Delay (Mary 2019). As noted above, an ACO was executed in December 2019 between MassDEP and the RP with deadlines. On April 9, 2020, a Tier Classification Extension Submittal and Ownership/RP Transfer was submitted to MassDEP per the ACO. This submittal fulfills the requirement in the ACO for a Phase III Report by April 30, 2020.

2.2 Previous MCP Work

2.2.1 Assessment

The following is a summary of assessment work completed by MassDEP (as noted) and Lord Associates, Inc. (all other work except as noted) at the site:

- From August 2011 to August 2013, evaluation of site area, groundwater well installation (DEP-12 and DEP-13), and soil gas sample point installations and soil gas sampling for VOCs at the site (SV-1 through SV-10) by MassDEP; and installation of bedrock well MW-105B by Corporate Environmental Advisors.
- Soil borings and monitoring well installations (2-inch diameter) were completed in April and August 2014. Including five soil borings, which were completed as groundwater monitoring wells: borings/wells LB-1/MW and LB-2/MW were located in the sidewalk in front of the building at 882B and 890 Massachusetts Avenue; boring/well-3/MW was located behind the building near the dumpster at 888 Massachusetts Avenue; boring/well LB-6/MW was located in the sidewalk in front of the building at 892 Massachusetts Avenue unit and boring/well LB-7/MW was located behind the 892 Massachusetts Avenue unit. Soil boings LB-4, -5 and -8 were completed through the building basement floor according to site plans and data tables in previous MCP reports.

 The borings were completed to 14 ft. (LB-7/MW) and 24 ft. (LB-1/MW) below ground surface. Soil samples were collected continuously and screened for TVOCs with a PID meter, and select soil samples were sent to a laboratory for VOC analyses via EPA Method 8260C (except LB-6/MW and LB-7MW because of lack of field screening results).
- In January 2015, to further investigate the potential source of the chlorinated solvents, a series of shallow soil boings were completed underneath the building foundation at 882B & 888 Massachusetts Ave. where dry cleaning equipment was formally located, and in the adjacent space at 890 Massachusetts Ave. (LB-9 through LB-21). The borings were completed by coring the concrete slab and collecting soil from a depth of approximately one foot beneath the slab with a hand auger. Each boring hole and sample was screened in the field for TVOCs with a PID meter. No TVOCs were detected in the boring hole or headspace of the samples. Eight of the ten samples were preserved in methanol containing vials and sent to a laboratory for VOC analyses via EPA Method 8260C.
- In September 2015, three injection wells were installed (INJ-1 through INJ-3).
- Collection of general groundwater parameters from five wells between April 2014 and April 2018: LB-1/MW, LB-2/MW, LB-3/MW, DEP-13 and MASC-1 or EMW-2 (across Massachusetts Ave. from property – north). Most of the data was collected from wells LB-2/MW, LB-3/MW and DEP-13.
- Groundwater sampling for VOC analyses from wells LB-1/MW (April 2014); LB-2/MW (nine rounds between April 2014 and April 2018); LB-3/MW (eight rounds between April 2014 and July 2017); LB-6/MW (April 2014); DEP-13 (six rounds between April 2014 and July 2017); and MASC-1 (four rounds between August 2011 and December 2015 – three of rounds completed by others).

- Indoor air sampling for VOCs: within Arlington Community Media (892 Massachusetts Ave.) with 7 samples between August 2013 and January 2019 (all first floor, except one basement sample, and with and without SSD operational); Former Arlington Tailoring and Cleaning (888 Massachusetts Ave.) and Thai Kitchen Restaurant (882A Massachusetts Ave) with 5 samples at each between August 2013 and January 2019 (all first floor, except one basement sample, and with and without SSD operational); and Toraya Japanese Restaurant (890 Massachusetts Ave.) with 6 samples between August 2013 and January 2019 (all first floor, except one basement sample, and with and without SSD operational).
- Monitoring of SSD system parameters via suction points SSD-1, -2A, -2B, -3 and -4 between August 2013 and April 2018, including air sample analyses for VOCs (August 2013 and November 2014).
- Ten rounds of groundwater elevation gauging between April 2014 and April 2018.

In addition to the assessment work at the site, assessment work in the site vicinity has been completed for two DPS submittals: one at 880 Massachusetts Avenue (RTN 3-30665) and one at 887 Massachusetts Avenue (RTN 3-33740). The DPS conclusion provided for 880 Massachusetts Avenue is refuted by Lord Associates, Inc. in the Phase II Report.

2.2.2 Remediation

Besides the operation of the SSD systems and APUs, Lord Associates, Inc. completed an ISCO remedial program beneath the building at the property. The remedial program beyond the operation of the SSD systems and APUs, which is detailed in multiple MCP submittals for the site included the following:

- Pre-ISCO groundwater monitoring;
- Four injection events between September 2015 and August 2017, including 8,757 pounds of persulfate and 1,588 pounds of iron. The injections were made in injection wells INJ-1 through INJ-3 and wells LB-2/MW and LB-3/MW (combination of these wells were used, depending upon the injection event); and
- Post-ISCO groundwater monitoring.

2.3 Site Subsurface Conditions and Conceptual Site Model

2.3.1 Hydrogeology

Based upon numerous drilling events at the site and in the site vicinity, including work at 880 Massachusetts Avenue (Cardno/ATC, Phase I Initial Site Investigation, Tier Classification and Phase II Scope of Work Report RTN 3-30665, February 15, 2013) and at 887 Massachusetts Ave. by GEI, the following information was presented in the Phase II Report:

- GEI's attempts to install five wells at 887 Massachusetts Avenue but did not encounter sufficient water to a depth of 25 feet below grade to make them feasible.
- Soil underlying the site consists of a dense fine sand with coarse to fine gravel and cobbles (glacial till). Boulders were encountered at several depths below grade, and refusal was encountered between 24-31 below grade, which was interpreted as the top of bedrock at 880 Massachusetts Avenue, and between 14-26 feet below ground surface at 887 Massachusetts Avenue. At the site, refusal was encountered between 15-31 feet below grade, indicating a drop in elevation of approximately 9-16 feet between the rear and front of the building at the property.
- Bedrock wells installed at the 880 Massachusetts Avenue cored into a fine grained igneous rock in the granite family, and the top of the bedrock surface was reported to be highly weathered and fractured. Fractures decreased with depth, and a bedrock surface elevation contour map developed by Cardno/ATC depicts bedrock rising to the west along Massachusetts Avenue and up to the south behind 880

Massachusetts Avenue (elevation 50-70 feet). It was reported that a low point was observed on Arlington High School property at wells ATC -9 & ATC-10 (elevation 40 feet). A cross section drawing of the wells located in front of the property at the site contained in the site Phase II Report shows a variability in depth to rock over approximately 5 feet between two wells (LB-2/MW & DEP-13) located approximately ten feet apart.

- Groundwater has been encountered at depths between 8-25 feet below grade at the site and site vicinity. The shallowest well, LB-3/MW, is located behind 888 Massachusetts Avenue at the site. Multiple elevation surveys completed by Cardno/ATC, MassDEP and Lord Associates, Inc. consistently depict a flow pattern similar to the surface of bedrock topography, with flow to the northeast, and with a shallow overburden aquifer flowing across the bedrock surface. Most of the wells sampled by Cardno/ATC in regard to 880 Massachusetts Avenue were noted to recharge quickly during development and sampling, and Lord Associate, Inc. noted that due to the low volume of water collected within the wells at the site, the wells typically go dry after a few minutes of pumping. Lord Associates, Inc. also noted that recharge is moderately good, and all remedial additive injections went well with no product surfacing.
- No aquifer testing has been completed at the site or adjacent properties to estimate the hydraulic conductivity of soils. Based upon site data and assumption, Lord Associates, Inc. estimated the average rate of groundwater movement or velocity as 0.009ft/day or 3 feet per year, with the note that the value is highly dependent on the assumed hydraulic conductivity values.

2.3.2 Extent of Impacts

The extent of soil, groundwater and air (soil gas and indoor ambient air) impacts at the site were presented in the Phase II Report and include (attached **Figure 3** depicts site data):

- The PID screening for total VOCs completed during the performance of test borings at the site detected no VOCs in the overburden (above the saturated zone). At boring LB-2/MW, no VOCs are detected until a depth of 19 ft. below ground surface (bgs) was reached where 70 part per million volume (ppmv) was recorded. The highest PID readings at the three other borings include 52.1 ppmv (DEP-12, 20 ft. bgs); 1.2 ppmv (DEP-13, 27 ft. bgs); and 1.2 ppmv (LB-3/MW, 11 ft. bgs). It was opined in the Phase II Report that the data does not indicate a surficial release of PCE at these locations.
- The laboratory results of the soil samples collected from inside the building underneath the concrete slab foundation detected PCE at concentrations ranging from below the laboratory reporting limit to 3.9 milligrams per kilogram (mg/kg) at LB-8. No other VOCs were detected in other samples analyzed, and one of the highest concentration (1.8 mg/kg) was found next to the former dry-cleaning foundation support at LB-14 located at 888 Massachusetts Avenue. PCE was not detected in sample LB-5 obtained from the boring located at 882B Massachusetts Avenue. It was opined in the Phase II Report that the data indicates a surficial release of PCE at the sampled locations.
- No VOCs above Method 1 GW-3 risk standards were detected in samples from wells LB-1/MW, LB-6/MW, DEP-13 and MASC-1 (some of these samples did contain TCE and PCE above the GW-2 standards). Samples from two groundwater monitoring wells (LB-3/MW and LB-2/MW) indicated exceedances of the applicable Method 1 groundwater standards. PCE, TCE and cis-1,2-dichloroethene (cis-DCE) exceed the GW-2 standards at well LB-3/MW (located behind the property building), and at well LB-2/MW (located on the sidewalk in front of the property building) the GW-3 standard is exceeded for PCE, along with the GW-2 standard for cis-DCE. PCE was most recently detected in July 2017 at well LB-3/MW at 410 micrograms per liter (ug/l) against a GW-2 standard of 50 ug/l; TCE at 200 ug/l against a GW-2 standard of 5 ug/L; and cis-DCE at 430 ug/l against a GW-2 standard of 20 ug/l. At well LB-2/MW, PCE was detected in groundwater samples prior to the ISCO injections at 55,000 ug/l (the GW-3 standard is 30,000 ug/l). Sampling of LB-2/MW following the last ISCO injection resulted in a detection of 40,000 ug/l in April 2018. Concentrations in samples collected from the deepest well (39 ft.) screened at the site (MW-105B), did not detect any VOCs.
- All other wells located at downgradient properties at 887 Massachusetts Avenue and Arlington High School appear to meet their applicable GW-3 standards. The groundwater surface has consistently been measured

below the depth of subsurface utilities: roughly 15 ft. bgs at 888 Massachusetts Avenue to 25 ft. bgs further east and north along Massachusetts Avenue.

- Pre-treatment PCE concentrations ranged from 11 to 124,000 ug/m^3 in samples of soil gas collected directly beneath the concrete foundation floor within the property building. A copy of a site plan with soil gas concentrations detected by MassDEP in May 2013 is provided in **Appendix A**. It was opined in the Phase II Report that the data presented on MassDEP figure indicated a concentration gradient from the front of the building at 888 Massachusetts Avenue to the rear near the former dry-cleaning machine support.
- Prior to 2018, air sampling indicated that the SSD systems had been effective in controlling potential vapor intrusion at the occupied businesses at the site. In 2018 and 2019, Lord Associates, Inc. completed an evaluation of indoor air conditions without the SSDs actively operational (after all dry-cleaning equipment and related operations were removed from the building in 2017). The results, as reported in the Phase II Report and Notice of Delay (May 2019), indicated no Substantial Hazard in 2018 (one sample location). Air testing was repeated in January of 2019 in five locations. And the results of that testing found no VOCs above the Commercial Threshold Values. The results are provided on Lord Associates, Inc. Table 7 in **Appendix A**.

2.3.3 Summary of Site Conditions

The property became a MCP site in 2012 due to a finding of elevated soil gas concentrations of PCE and its related daughter products by MassDEP as part of an investigation into impacts identified at the Arlington High School (northeast of the site). MassDEP noted the possibility of two PCE plumes; one travelling through the Massachusetts Ave. and Schouler Court intersection from the west, and one originating south of the school east of that intersection in a northeast direction.

The property has a history of being occupied by a dry cleaning facility, although only the business at 888 Massachusetts Avenue has a documented release of PCE dry cleaning fluid, which has been detected in groundwater, soil, soil gas and indoor air at the site. As part of site assessment and remedial activities, the highest concentrations of PCE found in groundwater, soil and soil gas were found in front of the former Arlington Tailor and Cleaning, at 888 Massachusetts Avenue. The site hydrogeology and extent of impacts are summarized in the two previous sections.

As part of the Phase II Report, a Method 3 Risk Characterization was completed for the site on the basis that potential exposure to site impacts are predominantly through inhalation of indoor air. Method 1 risk standards in groundwater are exceeded in samples from two locations as noted above. At LB-3/MW the standard that is protective of indoor air (GW-2) is exceeded, and at LB-2/MW, the standard that is protective of public welfare and the environment (GW-3) is exceeded. All soil sample results meet applicable cleanup standards, and recent indoor air results found levels below Commercial Threshold Values. During IRA activities, SSD systems and APUs were operational. As reported in the Phase II Report, no current downgradient exposure points or public welfare issues have been identified, and there are no Imminent Hazards or uncontrolled Substantial Hazards at the site. Although there are no current exposures, under reasonably foreseeable future site conditions, such as new construction, site use, or utility line maintenance, exposure potential may be different. It was concluded in the Phase II Report, based upon the site conditions at the time and the results of the risk characterization, that comprehensive Remedial Actions are necessary at the site to achieve a Permanent Solution. A condition of No Significant Risk of harm to safety does exist at the site.

The potential migration pathways at the site include air (vapor intrusion) into the existing property building and future building (there is evidence of impacts), soil (evidence of impacts, although deep), and groundwater (evidence of impacts); but not surface water or sediment. Potential human exposures include inhalation of air via vapor intrusion; and no expected dermal contact or ingestion of soil and groundwater. No environmental concerns were noted in the Phase II Report.

Multiple other potential sources for the observed contamination at the Arlington High School have been identified including a former gas station at 880 Massachusetts Avenue (RTN 3-22012/30665) that identified PCE in soil and groundwater in a 2003 report; a former gas station at 887 Massachusetts Avenue that identified PCE in groundwater in 1999; a shopping plaza at 905 Massachusetts Avenue that identified PCE in groundwater in 1995 (RTN 3-2004);

and a printing shop (Arlington Lithograph, Inc.) at 6 Schouler court. There was also a documented release of waste oil in the school auto repair shop that reported PCE being present. As previously noted, both former gas station properties have submitted DPS statements to the MassDEP alleging that the source of the contamination at their properties is from the upgradient subject property. However, as reported in the Phase II Report, there is evidence that conditions at these sites pre-existed Arlington Tailor and Cleaners dry cleaning operations and Phase II subsurface investigations conducted in support of this investigation do not support the property at 880 Massachusetts Avenue as being downgradient. With consideration that there are multiple sources for the observed groundwater contamination in the area, Lord Associates Inc. has drawn the site boundaries based on recorded groundwater concentrations, the inferred direction of groundwater flow, velocity, and a conservative estimate of the date of the known release at the site. No additional assessment work has been completed by AECOM, and it is expected that site conditions will be further refined when remedial investigations are completed (discussed in next section).

The IRA activities completed at the site included indoor air testing, and installation and operation of SSD systems and APUs. When operational, the systems were reported in the Phase II Report as being effective in controlling and preventing a vapor intrusion pathway at the site building, and the risk characterization evaluation considering exposure to indoor air under the condition of the systems being operational found a condition of No Significant Risk. The last air sampling conducted by Lord Associates, Inc. in 2018 and 2019 without the systems operating, indicated no Imminent Hazards. As presented above, a remedial program of ISCO was implemented to target the presumed area of the release under the building at 888 Massachusetts Avenue. The remedial work included four injection events totaling approximately 9,000 pounds of iron-catalyzed sodium persulfate. As reported in the Phase II Report, results indicated improvements in some of the wells, with concentrations re-bounding at several locations.

It was concluded in the Phase II Report that in the absence of an evaluation of post-remedial efforts that finds that the source is decreasing and has been controlled, and that site conditions represent a condition of No Significant Risk under reasonably foreseeable future site conditions, it is not possible to support a Permanent Solution Statement, and that additional comprehensive remedial actions were required pursuant to 310 CMR 40.0840.

3. Phase III Objectives

The MCP requires that a Phase III RAP be prepared for a site where a Phase II CSA has been completed and a Permanent Solution has not yet been achieved (310 CMR 40.0852). Phase III performance standards require that a Phase III evaluation result in the recommendation of a remedial action alternative (RAA) as described in 310 CMR 40.0861 that is either a Permanent or Temporary Solution.

Per the MCP, a Phase III evaluation shall result in:

- The identification and evaluation of remedial action alternatives which are reasonably likely to achieve a level of No Significant Risk considering the oil and hazardous material present, media contaminated, and site characteristics; and
- The recommendation of a remedial action alternative that is a Permanent or Temporary Solution, where a Permanent Solution includes measures that reduce, to the extent feasible, the concentrations of oil and hazardous material in the environment to levels that achieve or approach background.

Consistent with the requirements of the MCP, the risks to human health and the environment under current and future site use scenarios were evaluated, and a Method 3 Risk Characterization was conducted for the site as summarized in the Phase II Report. Based on the results of the Method 3 Risk Characterization a condition of No Significant Risk does not exist at the site. To achieve a Permanent Solution, the following site-specific remedial objectives were identified:

- Mitigate potential inhalation exposures to achieve a condition of No Significant Risk for human health.
- Mitigate potential sources of contamination at the site, to the extent feasible.
- Minimize waste generation during the work through the use in-situ technologies or other appropriate measures.

The performance standards of the MCP require consideration of remedial actions that would reduce the overall mass and volume of impacts at a disposal site to the extent feasible (310 CMR 40.0191). The feasibility of reducing the overall mass to approach or achieve background depends on the site-specific cleanup method selected to achieve a Permanent Solution and is evaluated in **Section 4.0**.

4. Phase III Remedial Plan

4.1 Identification and Initial Evaluation of Remedial Technology Alternatives

AECOM prepared this Phase III RAP in accordance with the requirements of the MCP (310 CMR 40.0850). The purpose of the RAP was to evaluate feasible remedial options and to identify and select a comprehensive RAA to achieve a condition of No Significant Risk and support a Permanent Solution for the site. Based on the risk characterization presented in the Phase II Report by Lord Associates, Inc., a condition of No Significant Risk does not exist at the site due to the presence of the VOC impacted subsurface and reasonably foreseeable future site conditions (i.e., new construction, site use, utility line maintenance) as the exposure potential may be different compared to current conditions.

The Phase III RAP documents the identification, evaluation and selection of the comprehensive RAA for the site. The evaluation consisted of two steps: an initial screening step to identify feasible remedial technologies followed by a detailed evaluation step where comprehensive RAAs developed based on the initial screening results are evaluated relative to MCP evaluation criteria specified under 310 CMR 40.0858.

4.1.1 Initial Screening of Remedial Technologies for the Site

In accordance with the MCP (310 CMR 40.0856), the objective of the Initial Screening Evaluation is to identify remedial technologies that would likely meet the remedial objectives presented in **Section 3.0** and in turn achieve a Permanent Solution for the site. The initial screening identifies potentially feasible remedial technologies for the site and evaluates them based on their relative effectiveness with site impacts and subsurface conditions, implementability and overall cost. For the initial screening, AECOM considered various technical resources, and evaluated proven and innovative remedial technologies.

The site-specific considerations for remedial technologies include the results of previous remedial measures and the current assumption that the current property building will be removed and replaced. If this assumption changes, modification to a chosen remedy may be documented in the Phase IV Remedy Implementation Plan due by May 2021 per the ACO. As the investigatory information below the site building is limited because of site constraints (i.e., lack of groundwater data, no soil results deeper than 1 foot below the building foundation), the development of the remedial alternatives considers varying levels of impacts in soils (i.e., large impacts, small impacts, minimal impacts). Based on available groundwater data upgradient and downgradient of the building, it is assumed impacts are located in groundwater underneath the building.

Based upon the initial screening of remedial technologies, remedial components that appear to be the most effective and readily implementable technologies for remediating site conditions are identified below. The eventual selected remedial action alternative may include multiple components identified in this initial screening. Note that ISCO was retained as a remedial alternative because this is a proven technology for chlorinated solvent VOCs (CVOCs) treatment with success based on contact with contaminants, with varying strengths of oxidants available. It is anticipated that increased success will occur for ISCO with better delineation of site subsurface below the building and potentially with a more aggressive injection design, which can be accomplished more readily with removal of the site building.

Soil

- Excavation and off-site disposal
- In-situ thermal remediation (ISTR)
- Soil vapor extraction (SVE)

- In-situ soil flushing

Groundwater

- Air sparging (AS)
- In-situ Treatment
 - ISCO
 - In-situ Chemical Reduction (ISCR)
 - Bioremediation

A summary of the initial screening results is presented in **Table 1**. A brief description of the technologies included in the initial screening and an assessment of the effectiveness, implementability and cost for each technology are provided below. The eventual selected remedial action alternative may include several components identified in the initial screening to comprehensively mitigate risk and achieve a level of No Significant Risk at the site.

4.1.1.1 Excavation and Off-Site Disposal

This technology involves excavating impacted soils to remove the potential source of impacts to groundwater and soil gas. Soil excavation and off-site disposal utilizes heavy machinery to excavate contaminated soil, which is loaded on trucks and transported off-site for treatment, recycling or disposal (as appropriate).

Excavation and off-site disposal is effective for remediating soils with organic contaminants. This technology is typically the most straight forward option for source removal in soils and has a rapid completion time-frame without long-term expenses.

Excavation and disposal is readily implementable given that it is assumed that the site building will be removed prior to remedial actions are implemented. Implementing this technology requires extensive engineering controls (e.g., dust control, excavation stabilization measures) to protect on-site workers and off-site receptors during remediation. The engineering controls increase with increase in depth of the excavation. Short-term impacts on the surrounding community, including increased truck traffic and noise, would also occur. The requirements for engineering controls, potential dewatering with a deep excavation, costs associated with transportation and disposal of contaminated soils, make the costs moderate to high depending on the soil impacts at the site.

Despite the high costs and implementation of the engineering controls, excavation and off-site disposal was retained for detailed evaluation because this technology is proven effective for reducing source impacts in soils at the site within a fast timeframe. In addition, the excavation and removal of soil can easily be implemented in combination with other technologies as part of a comprehensive remedial alternative.

4.1.1.2 In Situ Thermal Treatment

In Situ Thermal Remediation (ISTR) is suitable for treating sites with significant contaminant mass (i.e., a source zone, free product, NAPL or hot spots). The ISTR remedial approach has been proven to successfully treat a wide variety of contaminants, including CVOCs. ISTR removes CVOCs from subsurface soil and groundwater by raising the temperature in the subsurface to a desired temperature (typically ~100ºC or greater). ISTR can achieve up to 99% reduction in a relatively short period of time (i.e., 6 to 12 months). As the soil is heated, CVOC are vaporized and/or destroyed by a number of mechanisms, including: (1) evaporation into the subsurface air stream; (2) steam distillation; and (3) hydrolysis. The volatilized CVOCs and evaporated water as steam are captured by a vapor recovery (VR) system or multi-phase extraction (MPE) system for above ground treatment. Extracted materials are separated in the treatment system and treated prior to discharge to the atmosphere for vapor and approved location for water (i.e., public sewer, private facility). The ISTR options include steam enhanced extraction (SEE), electrical resistivity heating (ERH) and thermal conductive heating (TCH), where SEE is generally more applicable to permeable soil types.

ISTR would be protective of human health and the environment by reducing the mass of COC contamination in both subsurface soil and groundwater in the treatment area providing long-term effectiveness and permanence. Achieving these reductions will substantially reduce contaminants so that downgradient groundwater concentrations would decrease at a more rapid rate. ISTR is significantly more expensive than other in-situ treatment processes however the treatment of CVOC source areas is effective and completed in a relatively quick timeframe. This technology typically applies to sites with significant soil and groundwater impacts behaving as a source of contamination. Applying ISTR to sites with only groundwater impacts is not an effective application of this technology due to the added energy input required in heating vadose zone soils which are not impacted to achieve removal.

ISTR is potentially implementable at the site as there are several logistical considerations. The technology would involve logistical challenges due to the urban location of the site, but this would likely be manageable based on previous ISRT implementation experience. Items required to implement this technology include permitting, high maintenance and infrastructure, and spacing requirements would need to be acceptable for ex-situ treatment system for vapor and condensed water. An approved location would need to be determined for treated water discharge as well. Controls of the ISTR system would be required for health and safety of the public and site workers. Also, due to the elevated temperatures the type and location of all subsurface structures (e.g., utilities, basements) in the area of treatment, as well as potential preferential pathways to sensitive receptors should be considered. This technology would require follow-up monitoring during the design phase to evaluate groundwater concentrations over time, which is implementable.

Despite the high costs and requirements for the implementation of the several engineering controls, ISTR was retained for detailed evaluation because this technology is proven effective for reducing source impacts in soils and groundwater at the site within a fast timeframe. In addition, this treatment technology would address both soil and groundwater impacts making this a more streamlined approach regarding the design as only one technology would be implemented.

4.1.1.3 Soil Vapor Extraction

A very common technique for in-situ soil remediation is soil vapor extraction which involves the installation of a series of vertical extraction vents (“wells”) in the contaminated soil above the water table and placing a negative pressure (i.e., vacuum) on wells in the vadose zone to pull contaminated soil vapors from the subsurface soils. The target contaminant groups for in situ SVE are VOCs and some fuels. SVE alone is not considered to be an optimal remedial technology to address impacts in the saturated zone. The vapor extraction wells are typically connected via a header system to collect the contaminated vapors for discharge to the atmosphere, with or without first being treated, depending on the quantity emitted and local/state air discharge regulations. For the soil surface, geomembrane covers are often placed over soil surface to prevent short circuiting and to increase the radius of influence of the wells. In situ SVE projects are typically completed in 1 to 3 years.

The application of SVE would be effective for the treatment of PCE in site soils as PCE has a high Henry’s Law Constant. A bench-scale or pilot would be conducted to obtain information necessary to design and configure the system as SVE treatment rates are site specific. The site subsurface soil type of dense fine sand with coarse to fine gravel and cobbles (glacial till) is favorable for this technology; SVE is not very effective in low permeability soils such as silts and clays.

This technology is implementable at the site. SVE poses low risk to community and site workers and can be a cost-effective approach to remove contaminants from unsaturated soils. This is often used in conjunction with other treatment such as air sparging for groundwater impacts. The technology would involve logistical challenges due to the urban location of the site, but this would be manageable. A location for the ex-situ treatment system appears to be available (e.g., parking area behind the building) or could be incorporated into new building design, as this requires minimal space. Items required to implement this technology include permitting, maintenance and infrastructure. As known utilities are 15 ft bgs, installation of infrastructure for this technology likely not be problematic.

This technology is considered an option for active site remediation due to moderate cost, because it is amenable to treating CVOCs and the site soil type is amenable for SVE treatment. The timeframe to achieve the S-2 site criteria in soils would be determined based on the extent of impact in soils to be assessed via pre-remediation delineation

investigations. In general, the timeframe for SVE systems range from 1 to 3 years with subsequent groundwater monitoring.

4.1.1.4 Air Sparging

Air sparging is the injection of air or other gases into the aquifer in an attempt to volatilize the contaminants, which then enter the unsaturated zone where they are captured via soil vapor extraction methods and treated ex-situ. Injected air traverses horizontally and vertically in channels through the soil column, creating an underground stripper that removes contaminants by volatilization. This injected air helps to flush (bubble) the contaminants up into the unsaturated zone where a vapor extraction system is usually implemented in conjunction with air sparging to remove the generated vapor phase contamination. This technology is designed to operate at high flow rates to maintain increased contact between ground water and soil and strip more ground water by sparging. Air sparging has a medium to long duration which may last, generally, up to a few years.

The application of AS for groundwater treatment would be effective for the treatment of PCE as PCE has a high Henry's Law Constant. AS can be a cost-effective approach to remove contaminants from groundwater. A pilot test would be conducted to define site specific design parameters. Subsurface soil type of glacial till and weathered bedrock in the estimated top 5 feet of the saturated zone, based on existing boring log data, is favorable for this technology. There are concerns of whether the injection points would be able to extend below the CVOC impacts due to the presence of weathered bedrock/bedrock.

This technology is implementable at the site. AS poses low risk to community and site workers to remove contaminants from unsaturated soils. This is used in conjunction with SVE to extract vapors resulting from AS activities, which also poses low risk to community and site workers. The technology would involve logistical challenges due to the urban location of the site, but this would be manageable. A location for the ex-situ treatment system appears to be available (e.g., parking area behind the building) or could be incorporated into new building design, as this requires minimal space. Items required to implement this technology include permitting, maintenance and infrastructure. As known utilities are 15 ft bgs, installation of infrastructure for this technology may be problematic depending on the location of the impacted materials as the AS injection wells would need to extend into the saturated zone. Also, if utilities are present in the treatment zone, management for the potential of short circuiting of vapors would need to be conducted.

This technology is considered a viable option for active site remediation for groundwater impacts due to moderate cost and since it is amenable to treating CVOCs. The timeframe to achieve the S-2 site criteria in soils would be determined based on the extent of impact in the saturated zone, which would be assessed via pre-remediation delineation investigations. In general, the timeframe for AS/SVE systems range from 1 to 3 years dependent on the volume of impacts with subsequent groundwater monitoring.

4.1.1.5 In-Situ Treatment - ISCO

Chemical oxidation has been demonstrated within the industry to directly treat CVOCs and has been proven to be a robust technology. ISCO acts to reduce the mass of organic contaminants through the direct injection of a strong oxidizing agent into the subsurface. Successful delivery of the oxidant to the contaminant, the primary factor controlling performance of the remedy, is dependent on geologic conditions, injection location, transport, and natural oxidant demand in the subsurface. Several chemical oxidants are available for contaminant remediation, including permanganate, persulfate, percarbonate, Fenton's reagent, and ozone. Each of the oxidants described below are effective for destruction of the most CVOCs:

- Ozone is a gaseous oxidant. ISCO using ozone requires a continuously operating ozone generator on-site, which consumes large amounts of electricity and requires more maintenance than ISCO with other oxidants. Also, delivery of a gaseous oxidant would be difficult and the propagation of the oxidant would most likely be slow and the half-life of ozone is relatively short compared to other oxidants.
- Persulfate is a robust oxidant that is fairly persistent in the subsurface, albeit slightly less than permanganate. Persulfate is a commonly used reagent and is slightly less stable than permanganate. The natural oxidant demand for persulfate has been observed to be less than that for permanganate (Huling and

Pivetz 2006). Sodium persulfate needs to be activated to be used for remedial chemical oxidation with iron, base, acid, and heat as potential activators.

- Permanganate is a persistent oxidant in the subsurface that has a characteristic deep purple color, which can be observed in downgradient areas. Potassium permanganate is a commonly used reagent that is more fully developed than other oxidants. It is highly soluble, so high concentrations of the oxidant can be injected and has been successful in a wide range of hydrogeologic environments (Huling and Pivetz 2006). Also, the cost to use permanganate vs. persulfate for this proposed injection program was assumed to be lower as a catalyst is required to be used for persulfate.

This technology is considered to be effective for the site since it is a proven technology which reduces CVOC concentrations. The effectiveness is dependent upon additional site delineation to the extent feasible, as with the other technologies. Additional delineation would increase the likelihood of contact of the oxidant with the contaminant. Also, a bench scale treatability study/pilot study would be conducted to determine appropriate design parameters. For this Phase III ISCO with permanganate will be evaluated based on lower cost and higher persistence and solubility.

This technology is implementable at the site. The technology would involve logistical challenges due to the urban location of the site, but this would be manageable. Items required to implement this technology include permitting and groundwater monitoring. As known utilities are 15 ft bgs, installation of injection points may be problematic depending on the location of the impacted materials.

Technology was retained for detailed evaluation because it is a proven and effective method in reducing PCE in soils and groundwater with moderate costs. ISCO is also implementable at the site with minimal waste products as treatment occurs in-situ.

4.1.1.6 In-Situ Treatment - ISCR

In situ reduction is believed to have a high potential for meeting a variety of remediation goals when it is used on appropriate sites. The chemistry of the contaminant degradation reactions that this technology depends upon is well-documented and established. This technology has shown high potential for achieving mass removal, concentration reduction, mass flux reduction, reduction of source migration potential, and a substantial reduction in toxicity.

In situ remediation processes involve the injection of specific quantities of highly reactive iron powder directly into contaminant zones. Pneumatic or hydraulic injection have been successful in introducing reactants to contaminants in zones of low permeability. Injection by direct push rigs has been used successfully to introduce treatment media rapidly to the groundwater or a soil source area. Note that iron injected as part of a water emulsion can treat only contaminants that are accessible by water and will not treat free-phase contaminants directly.

Abiotic dechlorination can be achieved through a surface reaction on zero valent iron (ZVI) or/and on iron sulfur mineral. Bioaugmentation with dechlorinating bacteria and pH buffer are also assumed to optimize the reductive dechlorination treatment. This approach is capable of rapid reduction in CVOC concentrations, and the carbon substrates are persistent amendments that support reductive dechlorination for 3 to 5 years. A combination amendment of emulsified vegetable oil (EVO) and ZVI is a recommended product.

This technology is considered to be effective for the site as it is a proven technology which reduces CVOC concentrations. The effectiveness is dependent upon additional site delineation to the extent feasible, as with the other technologies. Also, a bench scale treatability study/pilot study would be conducted to determine appropriate design parameters.

This technology is implementable at the site. The technology would involve logistical challenges due to the urban location of the site, but this would be manageable. Items required to implement this technology include permitting and groundwater monitoring. As known utilities are 15 ft bgs, installation of injection points may be problematic depending on the location of the impacted materials.

Technology was retained for detailed evaluation because it is a proven and effective method in reducing PCE in soils and groundwater with moderate costs. ISCR is also implementable at the site with minimal waste products as treatment occurs in-situ.

4.1.1.7 In Situ Treatment - Bioremediation

This technology provides remediation of VOCs by amending the groundwater to create reducing groundwater conditions for reductive dechlorination of PCE and TCE by bacteria. Naturally-occurring microorganisms create hydrogen, which replaces chlorine on chlorinated ethenes. Natural biodegradation of chlorinated ethenes can be accelerated through the addition of a carbon source (as a food source and electron donor) and/or nutrients. Groundwater geochemical conditions becomes more reducing as aerobic microbes consume available dissolved oxygen (DO) through respiration of a portion of the high concentrations of carbon added. Proprietary microorganisms could be introduced into the subsurface to degrade PCE as well. Reductive dechlorination reduces PCE to the end daughter product of ethene.

Anaerobic bioremediation (reductive dechlorination) is a commonly applied treatment method that has been demonstrated to be effective for CVOCs in the industry. The biology/chemistry of reductive dechlorinating reactions is well understood and can often result in a very rapid decrease in contaminant concentrations. The effectiveness for the site depends on the ability to deliver carbon source to the location of the contaminant (as for other in situ technologies) and the ability to establish/maintain suitable reducing ("redox") conditions. Also, a potential complication of the reductive dechlorination process of PCE to ethene is the generation of the intermediary dechlorinating byproduct of vinyl chloride. Vinyl chloride is a chemical that has a lower GW-2 criteria than PCE.

This technology is implementable for the site. A bench scale treatability study/pilot study would be required to estimate remedy design parameters. In addition, the subsurface must be conditioned to establish an anaerobic environment, which may take 1-3 months before injections of the carbon source would begin.

Bioremediation is retained because of proven effectiveness in treating CVOCs in groundwater and it's implementability at the site. This is a moderate cost technology for groundwater with minimal waste product which can be combined with vadose zone treatment options. The generation of dechlorination by-products for the site would be evaluated with a bench scale/pilot study.

4.1.1.8 In Situ Soil Flushing

In situ flushing involves flooding a zone of contamination with an appropriate solution to remove the contaminant from the soil. Water or a liquid solution is injected or infiltrated into the area of contamination. The contaminants are mobilized by solubilization, formation of emulsions, or a chemical reaction with the flushing solutions. After passing through the contamination zone, the contaminant-bearing fluid usually was traditionally collected and brought to the surface for disposal, recirculation, or on-site treatment and reinjection.

The effectiveness of flushing with water can be limited by the solubility of the contaminant, rate-limited desorption (i.e., when desorption of the contaminant from the solid phase to the aqueous phase is slow), and the presence of low-permeability zones and other subsurface heterogeneities. Chemically enhanced flushing solutions often can be tailored to address recalcitrant contaminants, and treatability studies are conducted to determine the feasibility of the approach; however, subsurface heterogeneities not detected during characterization or considered in implementation can still limit flushing effectiveness. Flushing solutions can be water, acidic aqueous solutions, basic solutions, chelating or complexing agents, reducing agents, cosolvents, or surfactants.

This technology is proven effective to enhance desorption of PCE sorbed to soils to increase available PCE for subsequent destructive treatment. Surfactants are effective for DNAPL mass removal but not useful for dissolved plume treatment, whereas ISCO is effective for plume control and treatment but can be less effective in areas where large masses of DNAPL are present. Coupling the two technologies offers new opportunities for source-zone treatment.

Soil Flushing is implementable at the site although high cost may make this option infeasible. Chemically enhanced flushing is an aggressive technique that is expected to achieve its goal fairly rapidly, ranging from months to a few years (ITRC 2009).

4.1.2 Development and Description of Remedial Alternatives

The RAAs have been developed based on varying levels of impact for soil (i.e., large, small, minimal) and based on available groundwater data for groundwater impacts. The area of groundwater impacted above GW-2/GW-3 criteria is assumed to be approximately 1,625 square feet (SF). This assumes an area of 25 feet x 65 feet extending from south of the site building to the north to the edge of the curb along Massachusetts Avenue. The soil impacted areas are based on the assumption that the point of release occurred in the area of the compressor/dry cleaner machine with resulting spreading with depth to the groundwater table. The large soil impacted area is assumed to extend approximately 10 feet south of point of release extending to the north of the site building with impacts from approximately 5 to 15 ft thickness within this area; approximately 850 square feet (SF) area with 500 cubic yard (CY) volume of total soils. The small soil impacted area is assumed to be located in a more isolated area in the overburden at point of release extending to the groundwater table; approximately 330 SF area with 175 CY volume of total soils. Minimal soil impacts indicate soils are generally below the S2/GW2 criteria and do not require treatment.

Additional site investigation information is needed to fully understand the site subsurface after the building is removed to better evaluate and design a proposed remedy. The estimation of remedial quantities is directly related to the existing site characterization data. For example, the estimated quantity of soil or groundwater that must be cleaned up to achieve a cleanup goal depends upon the data collected to determine the nature and extent of contamination. Likewise, the estimated soil vapor extraction rate or groundwater pumping rate depends on the methods used to estimate air permeability or hydraulic conductivity (e.g., estimated values based on soil type, field pumping tests), as well as the operating capacity of the equipment (e.g., sizing of pumps, blowers, etc.).

Because a combination of the above technologies can achieve a condition of No Significant Risk at the site, they were each considered in the development of comprehensive RAAs. The formation of comprehensive RAAs for the site strived to incorporate the most effective and implementable technologies, while cost-effectively balancing and reducing exposure to site contaminants. Based on these criteria, the following comprehensive RAAs for the site include:

<u>Large Soil Impacts and Groundwater Impacts</u>

- RAA 1: Soil excavation to below S2/GW2 criteria + in situ Groundwater Treatment
- RAA 2: ISCO with in situ Soil Flushing
- RAA 3: ISTR for Soil and Groundwater Treatment

<u>Small/Minimal Soil Impacts and Groundwater Impacts</u>

- RAA 4: SVE/AS for Soil and Groundwater
- RAA 5: Focused soil excavation to below S2/GW2 and In-Situ Groundwater Treatment (small soil impacts only)
- RAA 6: In-Situ Groundwater Treatment (minimal soil impacts only)

The RAAs are summarized in **Table 2** – Remedial Action Alternatives Comparison.

A description of each Remedial Alternative is provided below.

4.1.2.1 RAA 1: Soil excavation to below S2/GW2 criteria + In-Situ Groundwater Treatment

RAA 1 assumes a large impacted soil area for remediation. Complete removal of soils would be conducted down to the saturated zone with field/laboratory sampling methods implemented to identify impacted material above S2/GW2 criteria. Backfill would be conducted with clean material. Groundwater impacts would be addressed via in-situ treatment. For the purposes of this Phase III Report, the in-situ groundwater treatment technology represented in RAA 1 is the amendment combination of EVO and ZVI including bioaugmentation with dechlorinating bacteria and pH buffer. This approach is capable of rapid reduction in CVOC concentrations and the carbon substrates are persistent amendments that support reductive dechlorination for 3 to 5 years. Past implementation has shown that groundwater rebound is less common due to the extended lifespan of treatment.

RAA 1 would reduce the source of PCE in soil across the site within the vadose zone to below SW2/GW2 criteria. Groundwater impacts would be treated for reduction to below GW-2 criteria via in-situ treatment which would not require extensive infrastructure or generate ex-situ products requiring treatment or disposal. The estimated timeframe for this RAA is approximately 2 years, with 4.5 months estimated for excavation and 18 months estimated for groundwater reductions to below GW2 criteria. There would be 1 year of follow up performance groundwater monitoring after groundwater injections are complete. The initial phase of work would involve pre-remedial investigation. The investigation and excavation would be conducted without the site building present to obtain best coverage of the site, and in-situ treatment is capable of occurring within a site building present - this would be investigated during the design process.

RAA-1 consists of:

Soils

- Complete removal of soils within footprint of the impacted area based on pre-remedial investigations extending to the saturated zone (500 CY);
- Implement excavation stabilization measures as required;
- Conduct health and safety measures during excavation to be protective of the public and site-workers (i.e., dust control, fencing);
- Implementation of field/laboratory methods to evaluate RCRA subtitle D non-hazardous vs RCRA subtitle C hazardous materials for proper transport and disposal. It is estimated that 40% of soils would be hazardous;
- Proper transportation and disposal for excavated materials;
- Conduct confirmation soil sampling; and
- Backfilling with clean material.

Groundwater

- Conduct bench scale treatability study/pilot study;
- An injection system, complete with the necessary tanks, mixers, pumps, piping, fittings, and controls would be constructed to safely and effectively inject a solution of oxidant into the area of impacts at the site;
- ISCO injections would be performed via installed semi-permanent wells or Geoprobe direct-push rods;
- A site specific designed spaced grid system of injection points would be used to provide sufficient distribution of the oxidant in the subsurface;
- Three injection events are assumed; and
- Performance and compliance monitoring.

Work under this alternative would also include pre-remedial investigation, remedial design, site clearing as necessary, site restoration and a post-construction remedial action report. Excavation of PCE contaminated soil will result in the generation of a hazardous waste, triggering special waste management requirements (e.g., storage in containers).

4.1.2.2 RAA 2: ISCO with *in situ* Soil Flushing

RAA 2 assumes a large impacted soil area for remediation. Soil and groundwater impacts would be address via ISCO using permanganate and soil flushing using surfactants. In this approach a surfactant would be incorporated into the ISCO program to enhance desorption of PCE sorbed to soil in the saturated zone and promote dissolution of assumed PCE DNAPL. A long-lasting oxidant, such as sodium permanganate, would be selected as the oxidant to oxidize desorbed CVOCs and to achieve CVOC concentration reduction downgradient of the injection area. The oxidant would first be injected in downgradient impacted areas followed by the permanganate + surfactant injection in the upgradient area with highest concentrations. This will be followed up with 1 to 3 injections depending on results of the performance monitoring. The later injections may be for a smaller impacted area, therefore the injectate volume would be less than for the initial injections. The estimated timeframe between injection is 9-12 months. The estimated timeframe for this RAA is 2.5 years, with 1 year follow up performance/compliance monitoring. The initial phase of work would involve pre-remedial investigation. The investigation and initial injections would be conducted without the site building present to obtain best coverage of the site, and in-situ treatment is capable of occurring within a site building present - this would be investigated during the design process.

RAA 2 consists of:

Soils/Groundwater

- Conduct bench scale treatability study/pilot study;
- An injection system, complete with the necessary tanks, mixers, pumps, piping, fittings, and controls would be constructed to safely and effectively inject a solution of oxidant and surfactant or only oxidant into the impacted area of the site;
- ISCO injections would be performed via installed semi-permanent wells or Geoprobe direct-push rods;
- A site specific designed spaced grid system of injection points would be used to provide sufficient distribution of the oxidant in the subsurface;
- Up to four injection events are assumed including the injection including surfactant and oxidant; and
- Performance and compliance monitoring.

Work under this alternative would also include pre-remedial investigation, remedial design, site clearing as necessary, site restoration and a post-construction remedial action report. There would no ex-situ treatment of waste products for RAA 2.

4.1.2.3 RAA 3: ISTR for Soil and Groundwater Treatment

RAA 3 assumes a large impacted soil area for remediation. ISTR would be implemented for treatment of soil and groundwater to achieve concentrations below S2/GW2 criteria. This technology could achieve mass reduction of 99%. The use of ISTR would require extensive infrastructure and would generate ex-situ products requiring treatment or disposal (i.e., vapor, water, spent granular activated carbon (GAC)). The estimated timeframe for this RAA is 9 – 18 months.

RAA 3 consists of:

Soils and Groundwater

- Conduct pilot test;
- Permitting;

- Establish utility feeds for operation of the system (i.e., including electricity, water, communication lines, and/or natural gas);
- Installation of ISTR system including heater elements throughout the target treatment zone, steam and vapor recovery system, trenching/piping/wiring, temperature/pressure monitoring points;
- Installation of power cables, communication lines, and water lines are placed in buried trenches or laid on the ground surface;
- Installation of the vapor and condensate processing and treatment system;
- The grid spacing is determined by the ISTT technology used, the target temperatures desired, and site specific characteristics;
- Startup/Testing of the ISTR system;
- System operation and operation and maintenance; and
- Performance and compliance monitoring.

Work under this alternative would also include pre-remedial investigation, remedial design, site clearing as necessary, site restoration and a post-construction remedial action report. ISTR treatment of PCE impacts in soil and groundwater would require treatment and discharge of extracted vapors and water from the subsurface. Also, GAC is a common ex-situ vapor and water treatment which would require regeneration or disposal of spent carbon.

4.1.2.4 RAA 4: SVE/AS for Soil and Groundwater

RAA 4 would be conducted for remediation of soil and groundwater for a small impacted area. Soil and groundwater impacts would be treated for reduction to below S2/GW-2 criteria via AS/SVE which would require infrastructure, extraction wells in the vadose zone, and would generate ex-situ products requiring treatment or disposal (i.e., vapor, spent granular activated carbon (GAC)). AS/SVE is considered an effective, proven technology to treat PCE impacted soil and groundwater. Note the concerns regarding AS injection wells being able to be placed sufficiently within the contaminated zone due to the presence of weathered bedrock/bedrock. Also, even though the soil impact is small, the groundwater impacted area is still 1,625 SF which requires treatment and extraction with SVE wells.

The estimated timeframe for this RAA is 23 months (2 years) with 1 year follow up performance/compliance monitoring.

RAA 4 consists of:

- Conduct pilot test
- Installation of AS/SVE system including AS injection wells, SVE extraction wells, trenching/piping and AS/SVE system;
- Startup/Testing of AS SVE system;
- Operations and maintenance; and
- Performance and compliance monitoring

Work under this alternative would also include pre-remedial investigation, remedial design, site clearing and grubbing and erosion controls as necessary, site restoration and a post-construction remedial action report.

4.1.2.5 RAA 5: Focused soil excavation to below S2/GW2 and In-Situ Groundwater Treatment (small soil impacts only)

RAA 5 would be the same as for soil remediation in RAA 1 except that remediation would be for a small impacted area. Groundwater treatment would be the same as for RAA 1. The estimated timeframe for excavation is 3 months

and for in-situ treatment is 18 months, for a total 21 months, with 1 year of follow on performance/compliance monitoring.

RAA 5 consists of:

Soils

- Complete removal of soils within footprint of the impacted area based on pre-remedial investigations extending to the saturated zone (estimated at 330 SF with volume of 175 CY);
- Implement excavation stabilization measures as required;
- Conduct health and safety measures during excavation to be protective of the public and site-workers (i.e., dust control, fencing);
- Implementation of field/laboratory methods to evaluate RCRA subtitle D non-hazardous vs RCRA subtitle C hazardous materials for proper transport and disposal. It is estimated that 60% of soils would be hazardous;
- Proper transportation and disposal for excavated materials;
- Conduct confirmation soil sampling; and
- Backfilling with clean material.

Groundwater Same as RAA 1

Work under this alternative would also include pre-remedial investigation, remedial design, site clearing as necessary, site restoration and a post-construction remedial action report. Excavation of PCE contaminated soil will result in the generation of a hazardous waste, triggering special waste management requirements (e.g., storage in containers).

4.1.2.6 RAA 6: In-Situ Groundwater Treatment (minimal soil impacts only)

RAA 6 would be the same as for groundwater remediation in RAA 1. It is assumed that there are minimal soil impacts below S2/GW2 criteria which would not require active remediation.

RAA 6 would treat groundwater impacts to achieve PCE reduction to below GW-2 criteria via in-situ remediation (assumed ISCO for this Phase III). This option would not require extensive infrastructure or generate ex-situ products requiring treatment or disposal. The estimated timeframe for this RAA is 18 months with 1 year of follow on performance/compliance monitoring.

Work under this alternative would also include pre-remedial investigation, remedial design, site clearing as necessary, site restoration and a post-construction remedial action report.

4.2 Detailed Evaluation of Remedial Alternatives

This section presents the development and detailed evaluation of RAAs using remedial technologies retained from the initial screening evaluation. The RAAs consist of technologies, or a combination of technologies, that are likely to reduce, mitigate, or eliminate risks at the site to achieve a Permanent Solution.

4.2.1 Effectiveness

The comparative effectiveness of the remedial alternatives is evaluated by assessing the opportunity for reusing, recycling, destroying, detoxifying, or treating contaminated media at the site, and reducing levels of untreated groundwater at the site to concentrations that achieve or approach “background” conditions. With respect to soils, all RAA’s are considered effective at addressing potential future direct contact exposure and achieving a Permanent Solution. RAA 1 and RAA 5 are considered the most effective alternatives to reduce the overall mass of CVOCs in site soils as they all involve excavation of impacted site soils to below S2/GW2 and excavation is a highly available

and proven method for soil impact removal. RAA 3 is a very effective, proven method of source reduction in soils for CVOCs, however it is a more complex, innovative technology requiring pilot testing. RAA 4 is effective for soil COC reductions, but the process to achieve a permanent solution is more complex than excavation and a treatability study/pilot study is needed. RAA 2 is effective to enhance desorption of PCE from soils for subsequent treatment, however it can be limited depending on factors in the subsurface (i.e., subsurface heterogeneities). RAA 6 assumes soils are not impacted so it is not compared here.

With respect to groundwater, all RAA's are considered effective for groundwater CVOC reduction at the site to achieve a permanent solution. All RAA's include technologies which are proven to treat and reduce elevated levels of CVOC's. RAA 1, RAA 2, RAA 3, RAA 5 and RAA 6 are considered slightly more effective than RAA 4 in the event air sparge point are not able to be placed at an appropriate depth to treat impacts due to difficult drilling.

4.2.2 Reliability

The comparative short-term and long-term reliability of the alternatives is evaluated by the degree of certainty that the alternative will be successful, and the effectiveness of any measures required to manage residues or remaining wastes. RAA 1 and RAA 5 are considered to have the highest long-term reliability, with respect to soils, as the impacted soils will be physically removed from the site. However, short-term reliability is less for these RAA's due to the potential for accidental release of soils during transport of the soils. The groundwater remedies for RAA 1 and RAA 5 are both proven technologies and thus have potential high long-term reliability and do not generate large amounts of waste materials, with results in high short-term reliability. RAA 2 is a proven technology which also has a high long-term reliability for reduction of soils and groundwater. Issues with RAA2 is the ensuring contact of the surfactant to desorb sufficient mass for subsequent treatment in groundwater.

The soil and groundwater remedy for RAA 4 does have long-term reliability as reduction of groundwater via air sparging is a common, proven method, and ex-situ vapor treatment is required. RAA 3 is considered to be reliable over the long-term because treatment would reduce soils and groundwater to below criteria as this is an aggressive, proven technology. Over the short-term RAA 3 and RAA 4 require ex-situ treatment of vapor and/or water, which could result in exceedances. Also, RAA 3 has potential issues regarding elevated temperatures that would need to be considered.

4.2.3 Implementability

The comparative difficulty in implementing each alternative is evaluated by the technical complexity of the alternative; any necessary monitoring, operations, maintenance or site access requirements or limitations; availability of necessary services, materials, equipment or specialists; and the availability, capacity and location of necessary off-site treatment, storage and disposal facilities (if necessary).

RAA 3 would be the most complex alternative to implement in regard to technical complexity with respect to required infrastructure, permitting, operations and maintenance and potential site limitations for treatment system placement. RAA 2 for groundwater only and RAA 4 would be complex in the sense of infrastructure/equipment and pilot testing requirements. With respect to soils, RAA 1 and RAA 5 would be the least complex alternatives albeit shoring within the urban location of the site may result in some technical complexities. With respect to groundwater, RAA 1, RAA 2, RAA 5 and RAA 6 would easily implemented because remedial actions are limited to injection and monitoring. However, complexities may arise in achieving contact of injectate with impacted area. This complexity regarding contact is also associated for RAA 2 for soils.

4.2.4 Cost

AECOM developed preliminary cost estimates for implementing each RAA. These estimates are based on existing site investigation and remedial activities completed to date and are provided for comparison purposes only; they are not based on final engineering design and do not include certain required site specific items that might be needed currently or in the future. The costs provide a range of +/- 30%. The costs do not include demolition of the site building. Refer to **Table 2** for a cost summary, which splits out soil and groundwater remediation costs where

applicable. Also refer to **Appendix B** for a general itemization of the costs. The estimated cost range for each alternative is provided below:

Large Soil Impacts and Groundwater Impacts

- RAA 1: $790,000 to $1,466,000
- RAA 2: $502,000 to $932,000
- RAA 3: $944,000 to $1,754,000

Small/Minimal Soil Impacts and Groundwater Impacts

- RAA 4: $516,000 to $958,000 (small or minimal soil impact area)
- RAA 5: $607,000 to $1,127,000 (small soil impact area only)
- RAA 6: $338,000 to $628,000 (minimal soil impact only)

4.2.5 Risk

The comparative risks in implementing each alternative is evaluated by the short-term on-site and offsite risks posed during implementation of the alternative. These risks include:

- Excavation, transport, disposal, containment, construction, operation or maintenance activities;
- On-site and off-site risks posed over the period of time required for the alternative to attain applicable remedial standards, including risks associated with ongoing transport, disposal, containment, construction, operation or maintenance activities; and
- The potential risk of harm to health, safety, public welfare or the environment posed to human or environmental receptors by any oil and/or hazardous material remaining at the disposal site after the completion of the remedial action.

During implementation, each alternative will require similar engineering controls for the protection of on-site workers and off-site receptors. Engineering controls include fencing, dust control/monitoring, and stormwater runoff management. RAA-1 and RAA-5 will pose a short-term risk during construction due to the excavation, handling, transportation and disposal of contaminated soil. RAA-4 will pose a short-term risk during operations due to requirement for ex-situ treatment of vapor extracted from the subsurface. RAA-3 will pose a high short-term risk during operations due to ex-situ treatment of vapor and water extracted from the subsurface and elevated temperatures generated. All the RAA's eliminate long-term risk. RAA 2 and RAA 4 achieve the permanent solution in a longer timeframe, resulting in longer short-term exposure risk during operations than for other RAA's.

4.2.6 Benefits

The comparative benefits in implementing each alternative is evaluated by the benefit of restoring natural resources, providing a productive reuse of the site, avoiding relocation costs, and avoiding lost value of the site.

The benefits for the RAAs are similar; each RAA reduces site impacts to below SW2/GW2 criteria, avoid relocation of people and businesses, and will avoid lost value of the site. All of the alternatives would achieve a Condition of No Significant Risk for the site by minimizing and/or eliminating exposure risks related to contaminated soils and groundwater, and all can be implemented following site building demolition, and coordinated with new construction, with additional injections and monitoring if needed taking place following construction.

4.2.7 Timeline

The timeframe to achieve a level of condition of No Significant Risk for large scale soil impacts is 1 – 2.5 years for RAA 1 and RAA 3. For RAA 1, soil and groundwater active treatment timeframe will be approximately 1 – 2 years, with approximately 1 year of compliance groundwater monitoring. For RAA 2, soil and groundwater treatment timeframe will be approximately 2.5-2.5 years with approximately 1 year of compliance groundwater monitoring. RAA 3 is estimated to 1 to 1.5 years with 1 year of compliance groundwater monitoring as well.

The timeframe to achieve a condition of No Significant Risk for small scale impacts is approximately 2.5 years for RAA 4, 2 years for RAA 5 and 1.5 years for RAA 6. All require approximately 1 year of compliance groundwater monitoring.

4.3 Selected Remedial Action Alternative

Based on the detailed evaluation of remedial technologies and the remedial objectives to reduce the amount of waste generation during the work, the selected RAA for large and small scale soil impacts with site groundwater impacts is RAA 2. RAA 2 involves the injection of surfactants with oxidants to desorb soil impacts for subsequent treatment with ISCO. This alternative involves minor infrastructure with no on-site ex-situ treatment requirements. As there are some uncertainties to ensure contact with soil impacts and injectate, actions including pre-remedial investigation and a treatability study/pilot study would be recommended. The implementation of in-situ soil and groundwater treatment is more implementable in the urban setting of the site as well.

RAA 1 and RAA 5 were considered as the selected RAA due to the certainty of soil source removal and relatively rapid completion, however the cost and generation of waste soils requiring transport and disposal ruled out these remedies. Also, in the event that soil impacts are minimal, in-situ groundwater treatment via the method specified in RAA 6 would be considered for the site.

4.4 Feasibility Evaluation

As part of the selection of the Comprehensive Remedial Alternative, the feasibility of achieving a Permanent Solution and achieving background conditions at the site was evaluated.

4.4.1 Feasibility of Achieving a Permanent Solution

Implementing the selected RAA will result in achieving a Permanent Solution. This RAA would include desorbing soil impacts with ISCO amended with surfactant. This would be followed by several additional oxidant injections to ensure with tight spacing to ensure contact of oxidant with contaminants in soil and groundwater. This method has been shown to significantly reduce PCE concentrations.

4.4.2 Feasibility of Achieving Background

In accordance with the MassDEP guidance, the feasibility of achieving background considers the technological feasibility and cost-benefit of achieving background.

ISCO with in-situ soil flushing (RAA 2) are proven remedial technologies capable of reducing contaminant concentrations at the site to achieve a Permanent Solution. However, it is not feasible to achieve or approach background at the site with this method because of the challenges involved to reach these levels. Both the treatment timeframe and cost would increase substantially due to 1) the need for closer spaced injection wells and/or additional injections to increase certainty of delivery to impacted subsurface locations and 2) extended timeframe and volume of injectate required as COC concentrations reach lower concentrations as the efficiency of the treatment process decreases with lower concentrations.

MassDEP has indicated in their guidance document on conducting feasibility evaluations that it is not feasible to achieve or approach background if the additional costs to remediate beyond a condition of No Significant Risk are more than 20 percent of the cost to remediate to a condition of No Significant Risk. The estimated cost to achieve background conditions across the site with RAA 2 is approximately $960,000, which is greater than 20%. The cost differential is the result of the following assumptions: one additional surfactant injection, 1-2 additional injections, extended treatment timeframe and additional labor on-site and in the office. Additional complications may result in additional costs such as treatment of groundwater downgradient of the site underneath Massachusetts Avenue, a greater treatment footprint, difficulty in treatment of potential COCs within bedrock fractures.

RAA 1 (excavation plus in-situ groundwater treatment) and RAA 3 (ISTR) were also reviewed for the possibility to achieve background as excavation offers complete removal of soil impacts and ISTR is successful at achieving 95-99% removal of source materials. However, these costs were also evaluated to be greater than 20% than the selected RAA. In the event excavation was conducted into the saturated zone, excavation would be difficult due to the presence of weathered bedrock/bedrock, required excavation depth and cost/risk increases to manage dewatered impacted groundwater. Likely additional groundwater treatment would be needed for groundwater post excavation as well.

The costs, effort and timeframe to achieve or approach background is disproportionate to the benefits that might accrue from such extensive remedial actions, and therefore, is not feasible.

4.5 Greener Cleanup Evaluation

Consideration of greener remediation approaches that eliminate or reduce the environmental footprint of the proposed construction activities to the maximum extent possible was completed pursuant to the MCP in 310 CMR 40.0191(3)(e), and is contained in **Appendix C**. The greener cleanup evaluation will be re-evaluated when additional remedial investigations are completed and final design of a remedy is taking place.

4.6 Schedule and Public Involvement

The Phase III report is planned for submittal to MassDEP on April 30, 2020. The Phase IV Remedy Implementation Plan is due by May 2021. The anticipated period for treatment implementation of the selected RAA is expected to last 1 to 2.5 years. The initial phase of work would involve pre-remedial investigation to obtain a more comprehensive understanding of subsurface conditions for development of a more fine-tuned design and the initial and second injections. The investigation and preferably the injections would be conducted without the site building present to obtain best coverage of the site, which is estimated to be approximately 1 to 1.5 years time. Note that in-situ treatment is capable of occurring within a site building present and this would be investigated during the design process. It is assumed follow up injections and performance monitoring would be conducted with a site structure present. Coordination and cooperation with stakeholders and contractors (environmental and structural) would need to occur in the event building construction occurs so that remediation work can continue according to design plan or be adjusted as necessary. A Temporary or Permanent Solution Statement or Remedy Operation Status Submittal is due by December 2021.

The required public notification letter noting the availability of this report is attached in **Appendix D**.

5. Phase III Remedial Action Plan Requirements and Conclusions

The Phase III RAP was prepared to evaluate remedial alternatives for the site located at 882-892 Massachusetts Avenue. This Phase III RAP includes the identification, evaluation, and selection of six comprehensive RAAs for the site based on regulatory requirements. A combination of these technologies or RAAs was selected as the comprehensive remedial action alternative for the site; these technologies include:

Large Soil Impacts and Groundwater Impacts

- RAA 1: Soil excavation to below S2/GW2 criteria + In-Situ Groundwater Treatment
- RAA 2: ISCO + Surfactants
- RAA 3: ISTR for Soil and Groundwater Treatment

Small/Minimal Soil Impacts and Groundwater Impacts

- RAA 4: SVE/AS for Soil and Groundwater
- RAA 5: Focused soil excavation to below S2/GW2 and In-Situ Groundwater Treatment [small soil impacts only]
- RAA 6: In-Situ Groundwater Treatment [minimal soil impacts only]

It is expected that the selected remedial action alternative for the site (RAA 2) will result in attaining a Permanent Solution at the site. The site-specific considerations for the remedial technologies evaluated included the results of previous remedial measures and the current assumption that the current property building will be removed and replaced. If this assumption changes, modification to a chosen remedy may be documented in the Phase IV Remedy Implementation Plan due by May 2021 per the ACO. Additional site investigation information is needed to fully understand the site subsurface after the building is removed to better evaluate and design the proposed remedy. The estimation of remedial quantities used herein is directly related to the existing site characterization data. The next step is completion of a remedial investigation once the building is removed, and a Phase IV Remedy Implementation Plan to provide the design for the selected alternative. The Remedy Implementation Plan includes the engineering design, construction plans and specifications, and an Operation, Maintenance, and/or Monitoring Plan for the selected remedial action.

Under the chosen RAA, ground water contamination must be stable or declining in concentration at the site, and should be confined to the source area property, such that ground water standards are met at the site boundary to ensure that human health and the environment continues to be protected, both now and in the future.

6. References

310 CMR 40.0000. The Massachusetts Contingency Plan. Bureau of Waste Site Cleanup. Boston, MA. April 25, 2014 and June 20, 2014.

MCP Documents for the site at –

https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=3-0031392



Town of Arlington, Massachusetts

Correspondence Received

Summary:
Correspondence received from:
D. Seltzer 051120
D. Seltzer 051420 with attachments
C. Klein 051620 with attachment
M. Varoglu 051720
A. Bagnall 051820
B. Elliott 051820
D. Seltzer 051820
E. Pyle 051820
H. Helson 051820
P. Worden 051820 with attachment
Z. Brown 051820
B. Thornton 051820
B. Rubin 051820

ATTACHMENTS:

	Type	File Name	Description
🗋	Reference Material	Correspondence_from_D._Seltzer_received_05112020.pdf	Correspondence received from D. Seltzer 05-11-20
🗋	Reference Material	Correspondence_from_D._Seltzer_with_attachments_received_0514020.pdf	Correspondence from D. Seltzer with attachments received 05 14 2020
🗋	Reference Material	Attachment_1_from_D._Seltzer_received_05142020.pdf	Attachment 1 from D. Seltzer 05 14 2020
🗋	Reference Material	Attachment_2_from_D._Seltzer_received_05142020.pdf	Attachment 2 from D. Seltzer 05 14 2020
🗋	Reference Material	Attachment_3_from_D._Seltzer_received_05142020.pdf	Attachment 3 from D. Seltzer 05 14 2020
🗋	Reference Material	Correspondence_from_C._Klein_with_attachment_received_05162020.pdf	Correspondence from C. Klein with attachment received 05 16 2020
🗋	Reference Material	Attachment_from_C._Klein_received_05162020.pdf	Attachment from C. Klein 05 16 2020

🗋	Reference Material	Correspondence_from_M._Varoglu_received_05172020.pdf	Correspondence from M. Varoglu received 05 17 2020
🗋	Reference Material	Correspondence_from_A._Bagnall_received_0518020.pdf	Correspondence from A. Bagnall received 05 18 2020
🗋	Reference Material	Correspondence_from_B._Elliott_received_05182020.pdf	Correspondence from B. Elliott received 05 18 2020
🗋	Reference Material	Correspondence_from_D._Seltzer_received_05182020.pdf	Correspondence from D. Seltzer received 05 18 202020
🗋	Reference Material	Correspondence_from_E._Pyle_received_05182020.pdf	Correspondence from E. Pyle received 05 18 2020
🗋	Reference Material	Correspondence_from_H._Helson_received_05182020.pdf	Correspondence from H. Helson received 05 18 2020
🗋	Reference Material	Correspondence_from_P._Worden_with_attachment_received_051820.pdf	Correspondence from P. Worden with attachment received 05 18 2020
🗋	Reference Material	Attachment_from_P._Worden.pdf	Attachment from P. Worden received 05 18 2020
🗋	Reference Material	Correspondence_from_Z._Brown_received_05182020.pdf	Correspondence from Z. Brown received 05 18 2020
🗋	Reference Material	Correspondence_from_B._Thornton_received_05182020.pdf	Correspondence from B. Thornton received 05 18 2020
🗋	Reference Material	Correspondence_from_B._Rubin_received_05182020.pdf	Correspondence from B. Rubin received 05 18 2020

From: Don Seltzer <timoneer@gmail.com>
To: Jenny Raitt <jraitt@town.arlington.ma.us>, Erin Zwirko <EZwirko@town.arlington.ma.us>, Andrew Bunnell <ABunnell@town.arlington.ma.us>, David Watson <DWatson@town.arlington.ma.us>, KLau@town.arlington.ma.us, EBenson@town.arlington.ma.us, rzsembery@town.arlington.ma.us
Date: Mon, 11 May 2020 10:32:24 -0400
Subject: Soil Contamination at 882-892 Mass Ave Docket 3625

CAUTION: This email originated from outside of the Town of Arlington's email system. Do not click links or open attachments unless you recognize the REAL sender (whose email address in the From: line in "< >" brackets) and you know the content is safe.

In reviewing the application packet for 882 Mass Ave I am surprised to find that there is no mention of the PCE soil contamination problem that exists at that site. It has been known for at least the last eight years. Active measures such as sub-slab depressurization and air purification systems are currently needed to control the internal vapor levels of PCE. One would think that this is relevant information to include in describing the site and that future mitigation methods would be part of the plans for a new building that places residential units on the ground floor.

Some of the PCE contamination has apparently migrated across Mass Ave towards the High School and the mixed use building at 887 Mass Ave. The latter was a property that was reviewed by this Board just a few years ago. There does not seem to be any documentation for that Special Permit application that addresses possible environmental contamination issues, despite that the site was formerly a gas station for many years during a time when little care was given to disposal of toxic chemicals. It should be of particular concern because the original proposed use has changed from ground floor retail to preschool.

That has frequently been the case for several recent properties that the Board has reviewed. 883 Summer St, the Downing

Square project, and the current application for 1207-1211 Mass Ave are all automotive repair/servicing sites that might reasonably be assumed to have soil contamination issues. Only the Downing Square project submitted documentation relating to that issue.

This suggests that a required element of the Board's Environmental Design Review process should be a specific review item related to local soil contamination conditions.

Sincerely,

Don Seltzer

From: Don Seltzer <timoneer@gmail.com>
To: Erin Zwirko <EZwirko@town.arlington.ma.us>
Cc: Andrew Bunnell <ABunnell@town.arlington.ma.us>, EBenson@town.arlington.ma.us, KLau@town.arlington.ma.us, David Watson <DWatson@town.arlington.ma.us>, rzsembery@town.arlington.ma.us, Jenny Raitt <jraitt@town.arlington.ma.us>
Date: Thu, 14 May 2020 15:37:00 -0400
Subject: Environmental Design Review Docket 3625, 882-892 Massachusetts Ave

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In advance of the May 18 meeting, I offer the following observations regarding the plans submitted for a four story, mixed use building at 882 Mass Ave. There are five significant zoning problems that stand out.

The first problem is with the parking area. Zoning Bylaw 5.3.7, 5.3.21, and 6.1.11 all require a buffer strip along the lot line adjoining the residential lot next door on Lockland. With the stockade fence indicated, the buffer strip must be a minimum of 5 feet wide.

The property is a corner lot. 5.3.8 requires that on the Lockland St side the building setback be 20 feet.

The proposed apartment building requires significant Usable Open Space. There is no area on the lot that meets the definition of Usable Open Space.

5.3.17 requires an Upper Story Step-back beginning at the third floor, not the fourth as shown in the plans

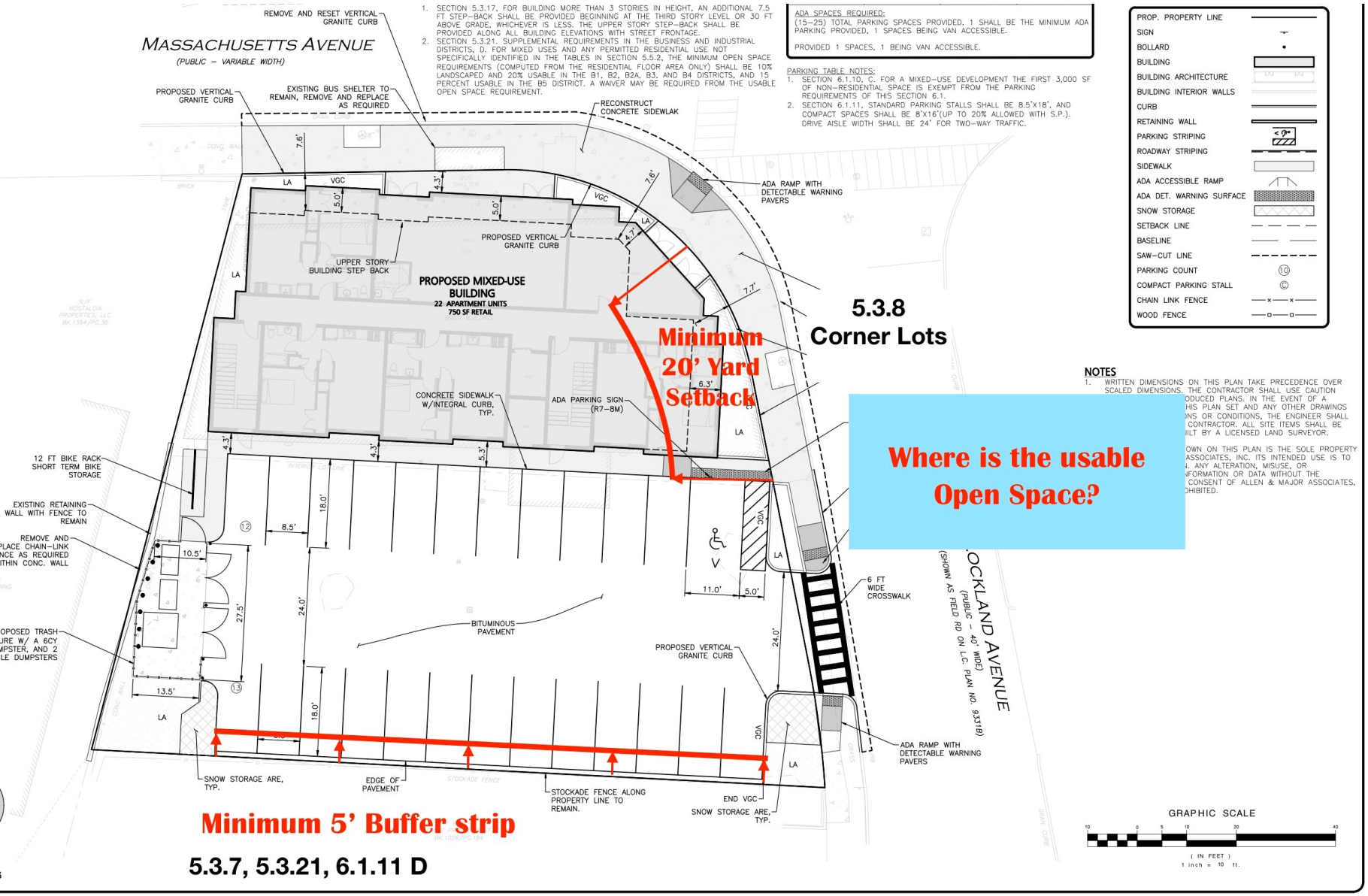
5.3.17 also requires that this Step-back be a minimum of 7.5 feet. Only a very small portion of the proposed building meets

this requirement. It appears that the architect has misinterpreted the bylaw to mean a minimum distance from the front lot line rather the front of the building.

Attached are three figures that illustrate these problems.

Sincerely,

Don Seltzer



1. SECTION 5.3.17. FOR BUILDING MORE THAN 3 STORIES IN HEIGHT, AN ADDITIONAL 7.5 FT STEP-BACK SHALL BE PROVIDED BEGINNING AT THE THIRD STORY LEVEL OR 30 FT ABOVE GRADE, WHICHEVER IS LESS. THE UPPER STORY STEP-BACK SHALL BE PROVIDED ALONG ALL BUILDING ELEVATIONS WITH STREET FRONTAGE.
2. SECTION 5.3.21. SUPPLEMENTAL REQUIREMENTS IN THE BUSINESS AND INDUSTRIAL DISTRICTS, D. FOR MIXED USES AND ANY PERMITTED RESIDENTIAL USE NOT SPECIFICALLY IDENTIFIED IN THE TABLES IN SECTION 5.5.2, THE MINIMUM OPEN SPACE REQUIREMENTS (COMPUTED FROM THE RESIDENTIAL FLOOR AREA ONLY) SHALL BE 10% LANDSCAPED AND 20% USABLE IN THE B1, B2, B2A, B3, AND B4 DISTRICTS, AND 15 PERCENT USABLE IN THE B5 DISTRICT. A WAIVER MAY BE REQUIRED FROM THE USABLE OPEN SPACE REQUIREMENT.

ADA SPACES REQUIRED:
(15–25) TOTAL PARKING SPACES PROVIDED, 1 SHALL BE THE MINIMUM ADA PARKING PROVIDED, 1 SPACES BEING VAN ACCESSIBLE.

PROVIDED 1 SPACES, 1 BEING VAN ACCESSIBLE.

PARKING TABLE NOTES:
1. SECTION 6.1.10, C. FOR A MIXED-USE DEVELOPMENT THE FIRST 3,000 SF OF NON-RESIDENTIAL SPACE IS EXEMPT FROM THE PARKING REQUIREMENTS OF THIS SECTION 6.1.
2. SECTION 6.1.11, STANDARD PARKING STALLS SHALL BE 8.5'X18', AND COMPACT SPACES SHALL BE 8'X16'(UP TO 20% ALLOWED WITH S.P.). DRIVE AISLE WIDTH SHALL BE 24' FOR TWO-WAY TRAFFIC.

- PROP. PROPERTY LINE
- SIGN
- BOLLARD
- BUILDING
- BUILDING ARCHITECTURE
- BUILDING INTERIOR WALLS
- CURB
- RETAINING WALL
- PARKING STRIPING
- ROADWAY STRIPING
- SIDEWALK
- ADA ACCESSIBLE RAMP
- ADA DET. WARNING SURFACE
- SNOW STORAGE
- SETBACK LINE
- BASELINE
- SAW-CUT LINE
- PARKING COUNT
- COMPACT PARKING STALL
- CHAIN LINK FENCE
- WOOD FENCE

NOTES
1. WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION ODUCED PLANS. IN THE EVENT OF A HIS PLAN SET AND ANY OTHER DRAWINGS NS OR CONDITIONS, THE ENGINEER SHALL CONTRACTOR. ALL SITE ITEMS SHALL BE ILT BY A LICENSED LAND SURVEYOR.

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GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
882-892 MASSACHUSETTS AVE, LLC
452 MASSACHUSETTS AVE, STE 1
ARLINGTON, MA 02474

PROJECT:
892 MASSACHUSETTS AVE
ARLINGTON, MA 02476

PROJECT NO.	2729-01	DATE:	04-10-20
SCALE:	1" = 10'	DWG. NAME:	C2729-01
DESIGNED BY:	ARM	CHECKED BY:	BDJ/RC

PREPARED BY:

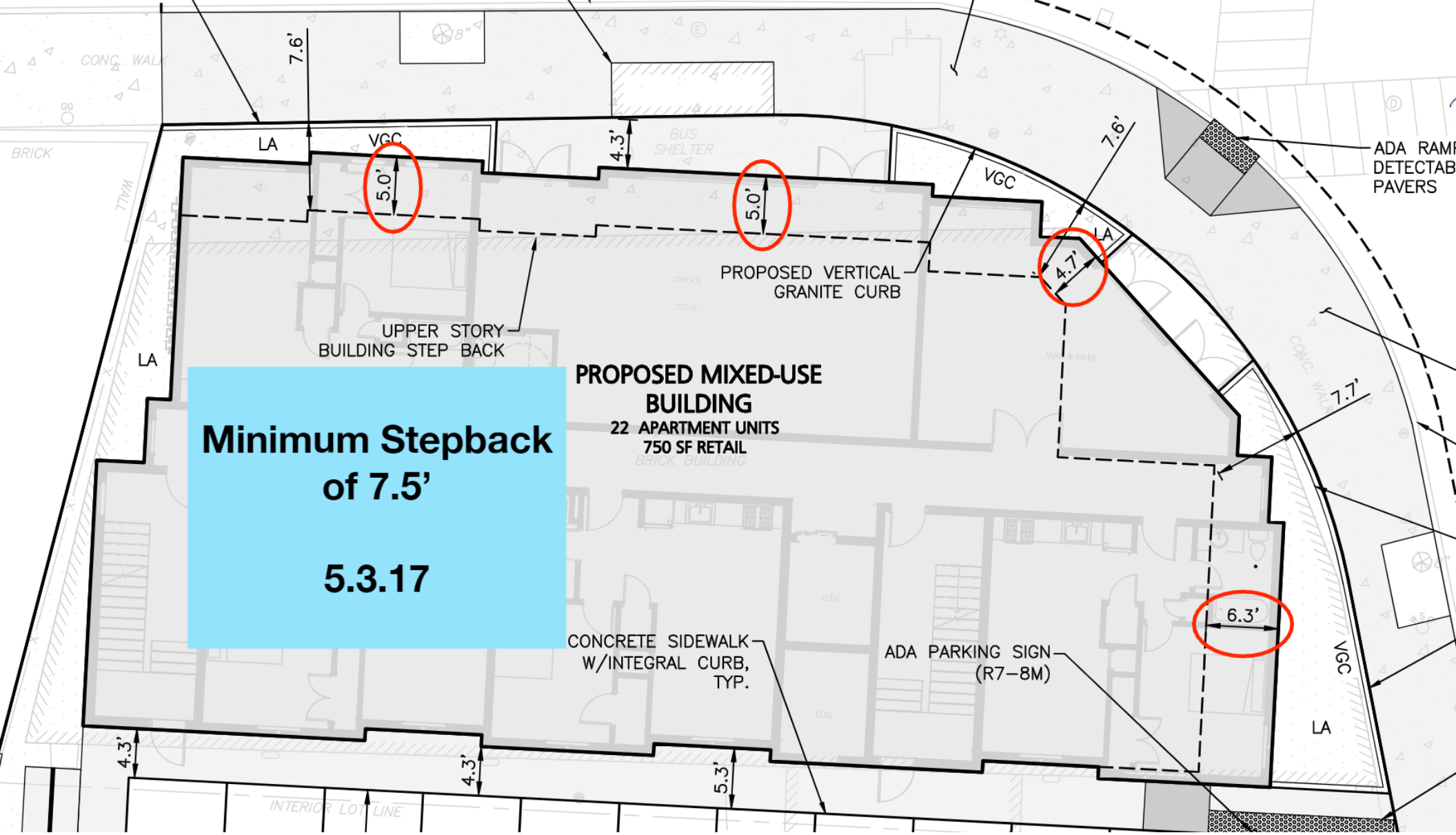
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WOBURN MA 01801
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DRAWING TITLE: LAYOUT & MATERIALS PLAN
SHEET No. C-102

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Upper Story Stepback
Begins at 3rd Floor
5.3.17


Minimum Stepback of 7.5’
5.3.17
PROPOSED MIXED-USE BUILDING
22 APARTMENT UNITS
750 SF RETAIL
UPPER STORY BUILDING STEP BACK
PROPOSED VERTICAL GRANITE CURB
CONCRETE SIDEWALK W/INTEGRAL CURB, TYP.
ADA PARKING SIGN (R7–8M)
ADA RAMP DETECTABLE PAVERS
7.6’
5.0’
4.3’
4.7’
6.3’
7.7’
5.3’
LA
VGC
BRICK BUILDING
INTERIOR LOT LINE

From: Christian Klein <cmqklein@gmail.com>
To: Jenny Raitt <jraitt@town.arlington.ma.us>
Date: Sat, 16 May 2020 18:37:16 -0400
Subject: 882-892 Mass Ave - Letter to ARB

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Ms. Raitt,

Please accept the attached letter into the record for the hearing regarding 882-892 Mass Ave. I intend to attend the meeting Monday evening, and I look forward to the opportunity to highlight the concerns raised in my letter.

If you have any questions, please feel free to reply to this email.

Best, and good health,

Christian Klein
54 Newport Street

May 16, 2020

Christian Klein
54 Newport Street
Arlington, MA 02476

Arlington Redevelopment Board
c/o Department of Planning and Community Development
Arlington Town Hall
730 Massachusetts Avenue
Arlington, MA 02476

Re: 882-892 Massachusetts Avenue

Dear Chairman Bunnell:

Solely as a resident of Arlington who lives in the same precinct, I am writing in regards to the proposed redevelopment of the existing single-story commercial building at 882-892 Massachusetts Avenue. I have many concerns regarding this project as it relates to both statutory compliance and benefit to the adjacent neighborhood where I live. I do believe that this parcel could be further developed. However, the proposal as it stands does not serve the existing neighborhood, nor does it serve its future tenants.

Zoning District Concerns:

The project site is in a B2 Neighborhood District. Per Section 5.5.1.B in the Town of Arlington Zoning Bylaw as amended through April 22, 2019 (hereafter ZBL), this district is "intended for small retail and service establishments serving the needs of adjacent neighborhoods and oriented to pedestrian traffic, and mixed-use buildings. … The Town discourages uses that would detract from the district's small-scale business character or otherwise interfere with the intent of this Bylaw." The existing building conforms very well to this standard. It is comprised of five storefront commercial spaces featuring a variety of services vital to the residents of the neighborhood. There are two restaurants, a local media studio, and a food bank serving the vulnerable members of our community.

By creating a new building with only a single "office" use, it seems only the media studio could reoccupy the building. In regards to microclimate considerations, the Applicant states that "the owner does not contemplate that there will be any installation of machinery which emits heats [sic], vapor or fumes from the site…" The proposed plans do not include any interior shafts leading from the first floor to the roof. As such, no restaurant could move in. It is also unlikely that the space would be amenable to the local food bank.

I do not object to the addition of residential units. To the contrary, I agree that the addition of apartments on this site would be appropriate and desirable. I ask the Board to consider requiring that the ground floor remain exclusively commercial, with the exception of access to the residential units above, to maintain the diversity of small retail and service establishments that exist on the site. To do otherwise would result in a substantial adverse impact upon the character of the neighborhood.

Mixed-Use Concerns:

The ZBL defines Mixed-Use as a "combination of two or more distinct land uses, such as commercial, … [and] residential in a single multi-story structure to maximize space usage and promote a vibrant,

pedestrian-oriented live-work environment." (emphasis added). What makes a vibrant environment? Merriam –Webster defines Vibrant as "pulsating with life, vigor, or activity." This block is already vibrant because of the multitude of different commercial uses, the very active bus-stop, and the ebb-and-flow of high school students. Reducing the number of commercial spaces to only one and closing off the remainder of the Mass Ave. frontage to public engagement makes the building far less vibrant than it is today. I contend this will have a substantially adverse impact upon the character of the neighborhood.

Bus Shelter Concerns:

There is a sheltered bus stop on Mass Ave. directly in front of this building. It is a very busy stop serving both residents commuting towards Cambridge and Boston and students heading to the high school. Few of the bus stops on this route have shelters, making this stop special. The shelter fits here because the existing sidewalk is eight-feet wide and the building is set approx. eight-feet back from the property line allowing generous space for pedestrians to pass easily behind the shelter.

The future of the shelter is unclear in the provided documents. Sheet G-101 notes that the Contractor is to "PROTECT AND MAINTAIN [the] EXISTING BUS SHELTER". This means the shelter remains during construction, with its structure protected against damage. However, sheet C-102 states "EXISTING BUS SHELTER TO REMAIN, REMOVE AND REPLACE AS REQUIRED". This means that the shelter could stay, it could be removed temporarily and returned, or it could be taken away and replaced with something else. That would be completely unacceptable.

The renderings provided by the Applicant imply that the bus shelter, and for that matter, the entire bus stop are going away. The image on sheet A9.00 does not include the bus stop or bus shelter. Instead, it shows an exposed bench against the building and metered parking spaces on both Mass Ave. and Lockland Ave. This is highly deceptive, because it falsely portrays the space in front of the building. Removing the bus shelter or replacing the bus shelter with something far less protective of riders will have a substantially adverse impact upon the residents of the neighborhood.

First Floor and Sidewalk Connection Concerns:

The existing building has a significant connection to Mass Ave. The position of the building eight-feet back from the edge of the sidewalk, allows pedestrians to stop in front of the building to look in through the windows without holding up pedestrian traffic. It allowed patrons waiting for a table at a restaurant to wait outside without blocking the sidewalk. Now, it allows patrons (myself included) waiting for take-out to maintain social distance. That additional space allows high school students to have space to congregate while they wait for the walk signal to cross Mass Ave. It also provides enough space for commuters to stand aside while students disembark from the bus before they can climb on.

The proposed plan shifts the building closer to the street and includes planting beds between the building and the sidewalk to keep pedestrians away from the residential uses on the ground floor. The beds are not in front of the commercial space, allowing pedestrians to come closer to the building. This is essential, because there would not be enough space to move down the sidewalk otherwise due to the bus shelter. The commercial space doors are located to either side of the shelter, which at least maintains a direct egress path from that space. However, the proposal to replace the pedestrian zone residents enjoy today with building and planting beds will have a substantially adverse impact on the pedestrians, bus commuters, and high school students from the neighborhood.

Open Space Concerns:

The statement from the Applicant to the Arlington Redevelopment Board (hereafter ARB) indicates that the proposed site plan meets the landscaped open space requirement by providing 10.2% of GFA, 0.2% more than is required by the ZBL. They also note that they are only providing 11.9% of GFA as usable open space, 8.1% less than is required by the ZBL. They indicate that this will require a special permit to remedy.

The Applicant's plans include ZERO usable open space. The definition of Usable Open Space in the ZBL indicates that it is "part or parts of a lot designed and developed for outdoor use by the occupants of the lot for recreation, including swimming pools, tennis courts, or similar facilities, or for garden or for household service activities such as clothes drying; which space is at least 75% open to the sky, free of automotive traffic and parking, and readily accessible by all those for whom it is required. Such space may include open area accessible to and developed for the use of the occupants of the building, and located upon a roof not more than 10 feet above the level of the lowest story used for dwelling purposes. Open space shall be deemed usable only if at least 75% of the area has a grade of less than 8%, and no horizontal dimension is less than 25 feet." (emphasis added) There is no area on this site that meets this requirement.

I do not understand the Applicant's assertion that only a special permit is required to eliminate the requirement for Usable Open Space. Since this would constitute a significant deviation from the requirements of the ZBL, it would appear that a Variance would be required. The Applicant has not addressed the requirements for a Variance.

Bicycle Parking Concerns:

The Applicant did make an attempt to comply with the ZBL in regards to bicycle parking. There are short-term spaces in the residential lobby and behind the building at the far end of the parking lot. There are long-term spaces in the basement.

The ZBL notes in Section 6.1.12.B that "Bicycle parking as required by this Section refers to the accessory storage of bicycles (which may include trailers or other customary accessories) in a secure manner that allows for quick and convenient access, storage, and removal of the bicycles by users who are making trips to or from the associated principal use." (emphasis added)

The ZBL differentiates between short- and long-term bicycle parking, noting in Section 6.1.12.C(2) that short-term spaces are "intended primarily to serve visitors, such as retail patrons, making trips of up to two hours to a particular use; however, it may serve other bicycle users as needed. Short-term bicycle parking is typically located in a publicly accessible area near pedestrian entrances to the use they are intended to serve." The short term spaces are located just about as far from the retail entrances as they possibly could be. This is not in keeping with the intent of the ZBL.

The ZBL indicates in Section 6.1.12.C(1) that "Long-term bicycle parking shall be intended primarily to serve residents, employees, and other persons who would require storage of a bicycle for a substantial portion of the day, for an overnight period, or for multiple days." As noted earlier, bicycle spaces are required to "provide quick and convenient access, storage, and removal of the bicycles…" Looking at the proposed floor plans (A1.00 and A1.01), it appears that the procedure for parking a bike in long term storage involves coming in through the corner entrance, through doors into the common corridor, taking the only elevator to the basement, exiting the elevator, avoiding a post nearly in front of the elevator door, and navigating a series of tight turns before arriving at the door to the long-term bike storage. The reverse procedure would be required to take a bike back out. The only alternative is to take the stairs. There is no possible way to describe this as "quick and convenient".

(As an aside, I also note that the Applicant's rendering on sheet A9.01 clearly shows a bicycle being ridden on the sidewalk in violation of Title III, Article 1, Section 5 of the Town Bylaws.)

The locations of the bicycle parking areas do not abide by the requirements of the ZBL and should not be considered acceptable. Indeed, they will have a substantial adverse impact upon the patrons and residents of the building and a substantially adverse impact upon the use of bicycles.

Conclusion:

Throughout this letter, I have pointed to issues with the proposal that pose a substantially adverse impact. As you are well aware, by Section 3.4.3.E of the ZBL, the ARB shall not deny a special permit "unless it finds that the proposed use does not comply with the Environmental Design Review Standards listed below to such a degree that such use would result in a substantial adverse impact upon the character of the neighborhood or the town, and upon traffic, utilities, and public or private investments, thereby conflicting with the purposes of this Bylaw." I believe that a full review of the proposed building project should lead to a finding that the project will have a substantially adverse impact on the neighborhood, and it is in conflict with the purpose of the ZBL.

I do believe there are steps which could be taken to greatly improve the proposal. The Public Hearing Memorandum issued by the Department of Planning and Community Development references a prior application made and approved in 1988 which sought to add up to six two-bedroom apartments above the existing masonry building. I would fully support this approach. It maintains the open space in front of the building. It maintains ground level commercial space on Mass Ave. It preserves the original 1910 façade, an example of early twentieth century commercial building construction. If the Applicant sought to provide eighteen residential units, surely the project would remain viable, and the town would still be able to claim three new affordable units.

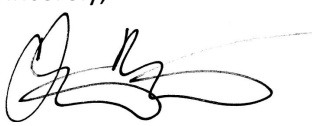
Future renderings and elevations should either include the existing bus shelter, or they should include whatever the Landlord is proposing to replace the shelter. Since the shelter is on Town property and may be the property of the MBTA, any change to the shelter will require careful scrutiny by the public.

The Applicant also needs to demonstrate that the project is in compliance with the Commonwealth's accessibility access law (521 CMR). A quick review of the plans indicates that the New Hampshire based architecture firm is unfamiliar with local regulations. It is unfortunate that the Environmental Design Review Standards do not include review of accessibility features.

This might also be a good time for consideration of what post-Covid housing should look like. Is funneling that many residents through limited vertical conveyances a good idea? Should there be an exploration of how to limit the number of interactions between the various apartments to allow the residents to come and go without exposing themselves to their neighbors? These are questions to which I have no answers, but I think it would be valuable to ask the Board of Health for their opinion on this and other future multi-family and mixed-use developments.

I appreciate the good work that you and your Board do on behalf of the residents of Arlington. I look forward to your discussion and deliberation on this proposed project.

Sincerely,



Christian Klein

54 Newport Street

From: Mustafa Varoglu <mvaroglu@gmail.com>
To: jraitt@town.arlington.ma.us
Date: Sun, 17 May 2020 15:15:14 -0400
Subject: Environmental Design Review Docket 3625, 882-892 Massachusetts Avenue

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Dear Ms. Raitt,

I'm writing to comment on the plans for the design of the proposed building at 882-892 Mass Ave. I'm a resident of the neighborhood and in favor of additional housing, but have concerns about specifics of the design at the ground level.
From what I can tell from the plans, the sidewalk between the new building and the Mass Ave curb will be narrowed by 4 or more feet. Just from this point of view this will make Mass Ave less inviting to walk as well as lead to bunching of students going to and from the high school. In front of this building there is an existing bus stop that should remain on this block for convenient access to the local businesses for those without cars. With the bus stop present people will be forced to funnel through a narrow pinch point while out in public which is poor street and pedestrian design. Especially in a post-Covid-19 scenario.
There appears to be an ample parking space in the back, perhaps the building can be moved back the same distance on the property or be made nominally smaller in the north to south dimension by using some of the space of the lot at back. It does not seem right to occupy what is now public space in a heavily trafficked corridor with this new design.
Regarding the new business space, as the landlord is not asking for permits for fumes etc it appears that a restaurant or coffee shop will not be able to occupy this space. This is a pity as we are losing two good restaurants in our neighborhood with this project. In addition, what mitigation is there that the embedded office space will not be converted to apartments in the future, can something be put in writing to have the landlords recognize this conversion is not possible?
Maintaining a streetscape with first floor businesses and inviting pedestrian travel makes Arlington a more attractive place to live.
Sincerely,

Mustafa Varoglu
26 Shawnee Rd.
Arlington

From: Alex Bagnall <alex.bagnall.tmm@gmail.com>
To: Jenny Raitt <jraitt@town.arlington.ma.us>
Date: Mon, 18 May 2020 09:47:24 -0400
Subject: 882-892 Massachusetts Ave

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Hello Ms. Raitt,

I would like to register my general support for the project at 882-892 Mass Ave. I am in favor of the creation of more housing, including some deeded affordable units, along one of our most walkable and transportation accessible streets. I appreciate that the design includes significant accommodation for bike storage. In all, this seems like a much better use of the lot than the single-story building that is there now.

Best,
Alex Bagnall

rom: Beth Elliott <bmelliott@gmail.com>
To: jraitt@town.arlington.ma.us
Date: Mon, 18 May 2020 09:19:39 -0400
Subject: 882-892 Mass Ave

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Dear Ms. Raitt,

My name is Beth Elliott, and I reside at 98 Highland Ave, Arlington, MA 02476.

Please accept my comments in support of the proposed demolition of the property currently located at 882-892 Mass Ave and its replacement with a multi-story mixed use development. I support this project for the following reasons:

1. It will provide much needed additional housing in Arlington, including affordable units.
2. The scale of the proposed building is consistent with the neighborhood, as there are existing multi-story apartment buildings within one or two blocks on the same side of Mass. Ave. that are the same height or taller than the proposed structure. The proposed set-back of the top floor, in addition, reduces the visual impact of the building from the street.
3. The incorporation of commercial space on the ground floor is consistent with the current usage of the space and will therefore harmonize with existing development patterns.
4. Although the proposal would reduce the sidewalk width, the sidewalk in front of the current building are significantly wider than the sidewalks on the same side of Mass. Ave immediately north and south of the site. Even lessening the sidewalk in the area of the current bus stop would not shrink the sidewalk/bus stop area in a manner inconsistent with other bus stops nearby along Mass. Ave. As a commuter who uses this bus stop frequently, I have no concerns that use of the bus stop will be made more difficult nor pedestrian traffic impeded.
5. This is an excellent site for housing from a transit/walkability perspective, due to the bus stop and the many amenities available within walking distance, such as multiple grocery stores, the Arlington public library, and several local restaurants. The inclusion of significant bike parking, both long and short-term, will also encourage residents to make use of bike travel as well. I would therefore expect the additional traffic generated by this development to be negligible.

Thank you,
Beth Elliott

From: Don Seltzer <timoneer@gmail.com>
To: Jenny Raitt <jraitt@town.arlington.ma.us>, Erin Zwirko <EZwirko@town.arlington.ma.us>
Date: Mon, 18 May 2020 09:45:16 -0400
Subject: Correspondence Docket 3602 - Table of Uses

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To the Redevelopment Board

In reviewing the latest submission of the applicant for 1207-1211 I noticed that a key argument is based upon the assumption that the principal use of the proposed project is not residential. There seems to be some confusion over the distinction between residential district and residential use. The attached table from the zoning bylaw clarifies that a hotel is defined as a residential use (by special permit) in a B4 district. This particular project does not meet the requirements of 5.3.6 for bonus provisions.

Don Seltzer

5.5.3. Use Regulations for Business Districts

Class of Use	B1	B2	B2A	B3	B4	B5
Residential						
Single-family detached dwelling	Y	Y	Y	Y	Y	Y
Two-family dwelling, duplex dwelling	Y	Y	Y	Y	Y	Y
Six or more single-family dwellings or six or more units in two-family dwellings or duplex dwellings on one or more contiguous lots	SP	SP	SP	SP	SP	SP
Three-family dwelling	SP	SP	SP	SP	SP	SP
Townhouse	SP	SP	DP	SP		SP
Apartment building		SP	SP	SP	SP	SP
Conversion to apartments, up to 18 units per acre, with no alteration to the exterior of the building	SP					
Single-room occupancy building	SP					SP
Group home	Y	Y	Y	Y	Y	Y
Hotel/Motel			SP	SP	SP	SP
Conversion of one or two-family dwelling to bed and breakfast	SP	SP	SP	SP	SP	SP
Assisted living residence				SP		
Dormitory *(Note: permitted if use is for educational or religious purposes.)*	Y	Y	Y	Y	Y	Y
Institutional, Educational						
Community center, youth club, adult education center, or similar facility operated by a non-profit institution *(Note: permitted if use is for educational or religious purposes.)*	SP	SP		SP		SP
Nonprofit, members-only private club or lodge	SP	SP	SP	SP	Y	SP
Non-exempt educational use, e.g., trade, driving, music, dancing school		Y	Y	Y	Y	Y
Library, museum, or art gallery open to the public and not conducted as a private gainful business. *(Note: permitted if use is for educational or religious purposes.)*	SP	SP	SP	SP		SP

From: Elizabeth Pyle <elizabeth.m.pyle@gmail.com>
To: Jenny Raitt <JRaitt@town.arlington.ma.us>
Date: Mon, 18 May 2020 12:23:30 -0400
Subject: 882-892 Massachusetts Avenue

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Dear Ms. Raitt,

I am writing to provide to comments on the application for 882-892 Massachusetts Avenue, which will be heard by the ARB this evening. Please forward these comments to the Board, and include them in the official record.

I live close to the 882-892 Massachusetts Avenue block, and my family has long enjoyed the Toraya and Thana Thai restaurants that are current tenants of this building. Small restaurants like these make this community (and Arlington) a desirable and convenient place to live, and contribute to the diversity of the area. We are disappointed that the current owners of this building have decided to displace their current tenants, especially at this time when small businesses are suffering so much from the impacts of Covid-19.

As a Town Meeting Member from Precinct 10, I can also report that our community values these restaurants as improving the quality of life in this area, and that my neighbors are upset that these long-time tenants are being forced out in favor of the proposed residential/office development.

The proposed development is too big, contains too many units, is too many stories tall and will detract from the character of the community. This is just the kind of development that this area does not need or want. The proposed building looks like every other generic office or apartment building, and it could be located anywhere in the country. No effort has been made to give it New England character, or to attempt to fit it in with the Arlington community. Coupled with the new 3-story building directly across the street, it will make a canyon of new (undesirable) modern towers on this block of Massachusetts Avenue. If it's anything like the building across the street, the landlord will rent the residential units at high prices, while the first floor office space sits vacant, or poorly utilized, for years. This completely eliminates the vibrant character that currently exists in this neighborhood, and would be a detriment to our community.

In addition, the community is concerned about the environmental impacts of soil contamination at this site and air quality impacts from the proposal -- especially since the new High School construction (in part on contaminated soil) will also be happening in this vicinity. Therefore, to the extent any project is approved, we urge the ARB to require the maximum environmental monitoring of this site, including air quality monitoring, so as not to negatively impact the health of abutters and pedestrians.

In conclusion, I urge you to please deny this application. This type of generic, dense, tall development that displaces valued institutions is not what this neighborhood wants. At a minimum, the building should be reduced by one story in height, it should be set back farther from all sidewalks, the landlord should include commercial space appropriate for restaurants on the first floor (not offices), and it should be redesigned to look more like a traditional New England commercial block with brick or other features common to existing buildings along Massachusetts Avenue.

Thank you for your consideration of these comments.

Sincerely yours,

Elizabeth Pyle
Town Meeting Member, Precinct 10
66 Gloucester Street
Arlington, MA 02476

From: <ARB@HaroldHelson.us>
To: "'Jenny_Raitt'" <jraitt@town.arlington.ma.us>, "'Erin_Zwirko'" <EZwirko@town.arlington.ma.us>, "'Joe_Andrews'" <heartsmoon@aol.com>, "'Bunnell'" <ABunnell@town.arlington.ma.us>, "'David_Watson'" <DWatson@town.arlington.ma.us>, <KLau@town.arlington.ma.us>, "'Eugene_Benson'" <EBenson@town.arlington.ma.us>, <rzsembery@town.arlington.ma.us>
Date: Mon, 18 May 2020 01:43:02 -0400
Subject: [ARB] Please do not allow zoning exceptions to build ugly

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Dear esteemed ARB members & staff:

In reference to tonight's meeting…

I am troubled by the modern trend of replacing attractive old buildings with extremely ugly new ones. Here in Arlington, the one next to Mystic Wine Shoppe should never have been built. (I have been told there were special factors involved, namely the acceptance of the builder to cope with environmental pollution that made the property undesirable to develop. I don't know about that.)

The ARB should not make exceptions to zoning laws to allow "ugly" buildings to replace stately old ones. The 882 Mass Ave case is one. The loss of the small businesses there I patronized and relied upon is painful, but moreover we *do not want a nonconforming replacement.* It should not be 4 stories tall regardless of the zoning laws. It should have full setbacks. And to the extent this can be dictated objectively, it should be beautiful. What you allow to be built will endure for a hundred years. You want to be careful. We don't want ugly. Maintain aesthetic standards, please.

The reason we live in Arlington is *not* to be surrounded by buildings like the one earlier cited. The reason we live here is *not* because we have crowded in a lot of people, which makes parking and traffic terrible. We do *not* have to increase housing or population in Arlington. The trend we are on will make housing much less affordable, under the pretense of doing the opposite.

The path I fear you are on will destroy the Arlington we love, bit by bit.

I do not mind building or development per se. I strongly mind ugly buildings and increases in population density. If you think that ugly buildings are necessary because pretty buildings are too expensive to build, and building must occur, I take exception. Building does not have to occur at that cost; don't tear down the old building at all.

So please do not grant exceptions to our zoning laws.

Please forgive me for taking up so much of your time, and especially, if I do not have an accurate view of your intentions or reasoning. I'm quite an amateur…but my visceral reaction to the decay of our corridor is well founded I think.

Respectfully yours,
Harold Helson
Bartlett Ave

mailto:ARB@HaroldHelson.us

From: Patricia Worden <pbworden@gmail.com>
To: Jenny Raitt <jraitt@town.arlington.ma.us>, "ABunnell@town.arlington.ma.us" <ABunnell@town.arlington.ma.us>, klau@town.arlington.ma.us, ebenson@town.arlington.ma.us, dwatson@town.arlington.ma.us, rzsembery@town.arlington.ma.us
Date: Mon, 18 May 2020 11:27:16 -0400
Subject: Testimony for Hearing May 18, 2020

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Testimony of Patricia Barron Worden Re;

Public hearing for Special Permit Docket #3625 to review application by 882-892 Massachusetts Ave., LLC, for 882-892 1 of 275 Massachusetts Avenue, to develop a new mixed-use building with twenty two (22) one-bedroom residential units and one (1) commercial space in a B2 Business District.

Chairperson Bunnell and Members of the Arlington Redevelopment Board

Please include the following testimony with the other materials pertaining to Special Permit Docket #3625

Reasons that this project as it is currently described should be denied a permit include the following:

1. 882-292 Mass. Av. is in the B2 district. Arlington Zoning Bylaw specifies as the primary requirement for the B2 Neighborhood Business District that:

it is for "small retail and service establishments serving the needs of adjacent neighborhoods" Town of Arlington Zoning Bylaw, Section 5.5.1 B

The plan to eliminate the restaurant and business uses including the Arlington Community Media Studio B and replace them with dense residences with only a tiny room–sized commercial space is clearly not in conformance with the purposes of the zoning district.

2. 5.3.8 may require that on the Lockland Avenue side the building setback be 20 feet since the property is a corner lot.
Also, the plan does not satisfy the Open Space requirement

3. 5.3.17 also requires that The Upper Story Step-back should be a minimum of 7.5 feet. That is not the case for much of the building.

5. The project is antithetical to the premise upon which Mixed Use zoning was presented to Arlington Town Meeting members to secure their approval. It was claimed to be a device for attracting business and commercial interests and having a residential component. It is instead in

this case being used for the opposite purpose of eliminating thriving and taxpaying restaurants and businesses and a studio of importance to the community. It was claimed that any problems with proper adherence to the goals of increasing business and commercial interests would be prevented by the ARB in the Special Permit process. But what is taking place at the May 18, 2020 hearing is using the Mixed Use provision in a barefaced attempt to enable an apartment building very much larger than would be allowed without Mixed Use and to destroy all businesses at the site. For this the proponent's strategy is to include one small room for commercial use. Does the ARB recognize its role in implementing honestly its assurances made of its ability to conduct satisfactory controls through the Special Permit process? If so then this Permit should reflect that or else, ideally, the permit should be denied. In this regard some early warnings indicating necessity for a more appropriate and enforceable Mixed Use provision are prescient – please see:

https://youtu.be/AO6EYDKnL_o

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To:

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https://youtu.be/AO6EYDKnL_o

From: Zeke Brown <zeke@brownfenollosa.com>
To: Jenny Raitt <jraitt@town.arlington.ma.us>
Date: Mon, 18 May 2020 16:36:09 -0400
Subject: 892 Mass ave

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Hello Jenny,
I'm not sure how best to make comments on this evening's hearing for 22 single bedroom apartments on the Toraya site. I do have a couple of observations. Maybe they are entered into the project or meeting notes...
For background, I am an architect, a resident of the Town for more than 15 years and nearly a neighbor to this site. I also have an office in town and I drive by this building almost daily. It is a very prominent site.

1. To call this 'mixed use' is not really accurate. It is an apartment building with an absolute maximum number of units pressed onto the lot with a very small 'office' space on the first level to gain the mixed use qualification. To further elucidate the point- there is actually an apartment and a bedroom which has the exact same relationship to the sidewalk (and bus stop) as the office space right next to it! And the situation repeats itself on Lockeland Ave... It seems that as a town we should be asking if this is how we want to give over space which sits very prominently within the public realm.
2. The sidewalk. The existing building steps back and has a very generous sidewalk in front of it. I often see people lingering here because of this extra space. It is a feature which is critical to good civic space (and it is good for business). In direct contrast, the building across the street has a sidewalk that barely allows a person with a stroller to pass another pedestrian without being forced to move out of the way. I have never seen anyone linger over there despite multiple entrances along the street and it being a daycare center. To further my point there is lots of space in front of the Blue Ribbon BBQ building and again, it is inviting, gives refuge and relief from the vehicular dominated roadway and it encourages people to linger. I think it would be a big mistake to press this new building so close to the street and turn our sidewalks into narrow thoroughfares rather than generous public spaces that actually encourage small business activity.
3. What is the office space going to be? An office which puts block-out shades in the windows and turns its back to the town? Why not make a fantastic restaurant space that opens to the street and is inviting and will make all the singles who live in the building actually want to move here? Why give the most prominent corner to the residential lobby instead of something which opens to the street and Mass ave, like a cafe? Give the business use on the first level the locations which can activate the streetscape.
4. And finally, is it possible to insist on commercial leases with programming that actually gives back to the greater community? We are losing a great restaurant, a media center, food link and other small shops. I think it would be a real missed opportunity to have another unfriendly and totally private facade jammed right up to the very edge of the sidewalk along this stretch of Mass ave. Have we not learned anything from the building across the street?

I am not anti development by any stretch. I just see an unfortunate pattern to much of it which minimizes civic engagement and responsibility in favor of shorter term gain. This stretch of Mass ave is way too important to not have a broader conversation about how the development of the site will give back to the community in exchange for being permitted to put up an entirely new building.

Many thanks and I hope you are well.

z

--
Zeke Brown
Architect

BROWN FENOLLOSA ARCHITECTS INC
197 Broadway Arlington MA 02474
p.781.641.9500 c.617.461.8191
zeke@brownfenollosa.com
www.brownfenollosa.com

From: Barbara Thornton <barbarathor@gmail.com>
To: Andrew Bunnell <ABunnell@town.arlington.ma.us>, Ebenson@town.arlington.ma.us, Kin Lau <KLau@town.arlington.ma.us>, David Watson <DWatson@town.arlington.ma.us>, Rachel Zsembery <rzsembery@town.arlington.ma.us>
Cc: Jenny Raitt <JRaitt@town.arlington.ma.us>, Erin Zwirko <ezwirko@town.arlington.ma.us>
Date: Mon, 18 May 2020 18:31:28 -0400
Subject: Special Permit for 882-892 Mass Ave. - Housing

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TO: ARB

The proposed 22 unit (plus commercial) project scheduled to replace 3 commercial buildings at 882-892 of Mass Ave., across from the high school is scheduled for a first hearing by the ARB tonight. Special Permit Docket #3625

Apparently all are single bedrooms. Based on the Design Study done by MIT last Fall, there is a real need for more single bedroom units in Arlington. They address two niches: 1) they are likely to be more affordable because they are smaller and 2) they provide a home for young single,pre-child rearing, professionals in their early creers and for older, post child rearing singles.

My concern, especially given Arlington's own participation in the effort to meet the region's need for housing, is that only THREE of the 22 residential units are dedicated for affordable housing.

As the regulatory agency with approval rights over this project, the ARB has considerable "soft power" and negotiating opportunity to have this development do better for the community.

I propose - give them another story, another 7 units. Encourage them to have TEN units affordable out of a total of ca. 30 units. Limit these to permanently rental units, not potential condos.

Consider your potentional use of eminant domain and step back from that to negotiate aggressively on behalf of the Town's larger interests, not just whether they comply with zoning regulations.

I'd also like to take this opportunity to comment on the sidewalk width. As we reconsider our towns, especially our transit corridors, in the post Covid 19 era, we will be looking for ways to create opportunities for maintaining "social distance" and for avoiding the pusthing together of pedestrians on sidewalk corridors, especially those near transit stops or other uses that attract pedestrians to stop and linger.

Thank you for this opportunity to share my thoughts.

Barbara Thornton
MCP
Precinct 16

From: Bill Rubin <brubin613@gmail.com>
To: jraitt@town.arlington.ma.us
Date: Mon, 18 May 2020 19:06:21 -0400
Subject: 882-892 Mass Ave Project -

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Hello Jennifer,

I hope you, your family and friends are doing well.

I am writing regarding the redevelopment of 882-892 Mass Ave.

There are many issues I have with the project.
One is the size of the project right across the street from another tall building. It gives the feeling and look of being hemmed in; it will have a tight and narrow part of Mass Ave, unlike any other Arlington location, particularly on Mass Ave. It is not a good look or feel.

My main concern is narrowing the sidewalk if this project is going to go through. This project's location has a higher pedestrian volume because of its proximity to the high school and the high-volume bus stop. The wider sidewalks are needed in that area.

Please keep the sidewalks wide!

Thank you for listening.

-Bill Rubin
10 Bonad Road,
Arlinigton, MA 02476